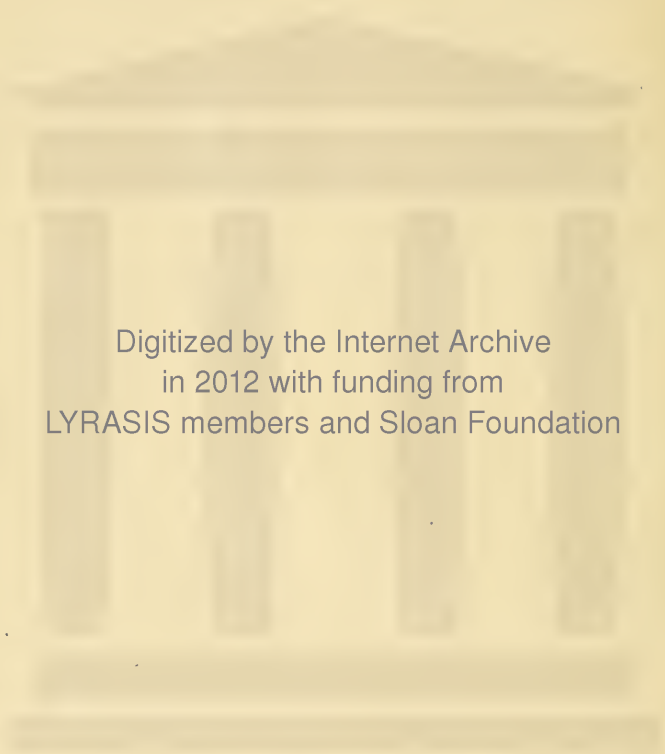




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HERITAGE

OF THE

TRANS-ALLEGHANY PIONEERS,

OR,

Resources of Central West Virginia,

BY THOMAS BRUCE,

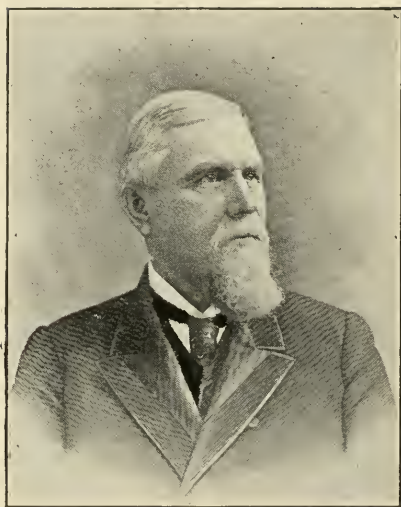
Author of: "Cupid and Duty." "Historical Sketch of Roanoke."
"That Brusin' Lad O' Graystone Lodge." "South
West Virginia and Shenandoah Valley."

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HON. JOHNSON N. CAMDEN,
U. S. SENATOR FROM PARKERSBURG, W. VA.

PREFACE.

HERITAGE OF THE TRANS-ALLEGHANY PIONEERS is now before the public. In the treatment of the subject, the author has endeavored to pursue the same lines in this work, that he adopted in former publications of a like nature. It has been his constant effort to maintain truth and impartiality at the expense of all other considerations, whether of a personal, or financial nature. The utmost care has been used in the investigation of facts, and compilation of statistics, none of which have been taken second-hand, and all of which have been subjected to the most crucial test. Owing to intense interest in the subject-matter, the work has been rather a labor of love than otherwise, wreathed with such memorials of bright pleasure, as completely obscure the privations, and vexations usually and necessarily attendant upon a work of this nature. In a field that is comparatively new, the acquisition of new realms of knowledge repays a world of care: so, in the prosecution of this work, time has been literally swallowed up in investigating nature's handiwork, marked so significantly by its epochs.

To the many good people, who reside in Central West Virginia, and to the various railway systems in the sections, as well as elsewhere, the author is more than deeply indebted. In every way, have they contributed to lighten his labors, and make the work more agreeable. The acquisition of facts pure and simple is at all times a difficult task, but in the prosecution of this work, the effort was made much easier by the kindness of those who had it in their power to aid. And to the Baltimore and Ohio Railroad, the West Virginia and Pittsburg Railroad, the Monongahela River Railroad, and the Ohio River Railroad, and the West Virginia Central and Pittsburg Railroad, the author is deeply indebted for every facility possible that could aid him in his undertaking. And in the judgment that may be placed on this, his latest effort, by far from perfect, it is but natural he should trust a great deal more to the indulgence of a kind public, than to any great merit in the work itself.

THE AUTHOR.

INTRODUCTION.

In tracing the footsteps of the early Pioneers, who were so brave as to cross the Alleghany Mountains to settle the land for successive generations, we find them leading westward through what is now the central part of West Virginia, running east, and west. The heritage transmitted by them to their descendants is a glorious one, being rich in natural wealth beyond calculation. No State in the Union has increased more rapidly within the past ten years in material wealth than West Virginia. But, up to three or four years ago this development was confined chiefly to the northern part bordering along the Baltimore and Ohio Railroad, and the southern part bordering the Norfolk and Western, and the Chesapeake and Ohio Railroads. The reason for this may be accounted for on the ground there were no transportation facilities. But the advent of railway systems into Central West Virginia within the past few years has created the beginning of a material development, that is as yet in its infancy.

In writing upon this subject, we have taken the section of West Virginia, embracing the counties of Mineral, Grant, Tucker, Randolph, Pocahontas, Webster, Clay, Calhoun, Gilmer, Braxton, Upshur, Lewis, Harrison, Doddridge, Ritchie, Wirt, Roane, Wood, Jackson and Mason, which compose Central West Virginia, running east to west. This country is as yet but partially developed, and is virtually unknown to the outside world. In our treatment of the subject, we have detailed its early settlement, and history. A careful, pains-taking account is then given of the topography, scenery, climate, and soil of the country. This is followed by an account of the various railway systems, that have developed it, and disembowelled a sufficient quantity of its riches to let us know what is in the regions—nothing more as yet. The agricultural resources are treated carefully, and statistically in every way, followed by a full and accurate description of the vast mineral resources of the region. The commercial prosperity is then adverted to, with an impartial account of the educational facilities, and Christian privileges of the country. Full credit is given the various corporations, and individuals which have assisted in the development, and everythink tending towards any advertising carefully excluded. The author can confidently assert, that the work may justly claim the merit of having been truthfully, and impartially written.

HERITAGE OF THE TRANS-ALLEGHANY PIONEERS,

OR,

Resources of Central West Virginia.

CHAPTER I.

First Adventurers of Virginia west of the Blue Ridge Mountains. Col. Abraham Wood.—Expedition of Capt. Batte and Party. Governor Spotswood and his Knights.—Colonels Patton and Buchanan.—The Ingles Party.—Draper's Meadows Settlements, in Montgomery.—Pioneer Settlers in West Virginia.—Settlements on the Ohio River.—On the Buckhannon, and Elk Rivers. Early Pioneers on the Monongahela, West Fork, and Tygart's Valley Rivers.—Gradual Settlement of the Sections until the War of 1774.

In the year 1738, Augusta County was taken from Orange, and at that period, in addition to its present boundaries, included all of the section west of the Blue Ridge Mountains, that represented the undefined claims of Virginia. Chronological records of the footsteps of the hardy adventurers who first trod the trackless wilderness west of the mountains, and into West Augusta, are scanty in the extreme. The hardships and daily toils of the early settlers to gain a scanty livelihood, added to the danger of uncertain attacks from the Indians, prevented the preservation of any records whatever as to their movements, lives and habits, in a permanent form; so, meagre materials and family traditions play a leading part. Even the brief histories undertaken upon the subject are unconnected and disjointed, most of them having been written and compiled by probably some one desiring to call the attention of the coming generations to deeds of valor performed, and sufferings endured

by his ancestors. The class of men who first went into the wilds of the mountains of Virginia to find new habitations, were not of the kind caring much for historical records: they rather preferred a musket and knapsack; and new countries to wander in for the purpose of opening up some undiscovered land. So, the future historian must grope his way, as it were, in the dark.

There has been some discussion among writers as to who was the first white man that crossed the Blue Ridge Mountains going westward. But from the best evidence we have upon the subject now, there can be but little doubt that Colonel Abraham Wood made the daring attempt. In the year 1653 he resided in Appomattox County, near the present site of the City of Petersburg. His object in taking such a dangerous trip, was to satisfy an adventurous, roving disposition: to explore the country west; and to open up a trade with the Indians. He obtained permission from the Governor of Virginia, and in 1654, started on his perilous journey, from the return of which in safety, his friends very much doubted. It is to be heartily regretted that neither the names, nor number of men he took with him, were recorded, or left in any way by which they might have been known. There can be no doubt of the route taken by him, for "Wood's Gap," known to be named after him, lies in the Blue Ridge Mountains, between Smith's branch of Dan River and the Little River branch of New River. So he must have first struck Little River, which he followed from the line of Virginia and North Carolina, until he reached the larger stream, now known as New River. After this, his route is unknown, and the duration of his stay uncertain. He probably went down the river some distance. (1)

What was the fate of Colonel Wood's party, or the exact result of his efforts to open a trade with the Indians, is not known, but the presumption is that the latter was unsuccessful. It is certain that the Indians were very unfriendly towards the next party crossing the Blue Ridge, for the guides refused to conduct it farther than a fixed point in the west, on the ground that certain tribes there had been unfriendly towards the whites: as Colonel Wood's companions were the only whites who had ever crossed the Blue Ridge, it must have been his party to

(1) Tradition has it that this river was at first called "Wood's River," but there is no historical evidence of such a fact. Following Little River until he came to its mouth, he saw the larger stream, and since it was a new river he doubtless called it "New River."

whom the guides referred; so, we naturally infer from this circumstance that Colonel Wood's negotiations with the Indians for the purpose of establishing a trade with them were not very successful. (2)

In 1656, fourteen years after Colonel Wood's adventure, Sir William Berkley was Governor of Virginia. Desiring to learn something of this new country west of the Blue Ridge Mountains, he dispatched a Captain Batte, with fourteen Virginians, and fourteen Indians, to make an exploration—all of whom started from Appomattox. (3) The route pursued by them is not known, but they had not proceeded very far west of the mountains before the Indian guides conducting them, refused to escort them farther, on the ground that the tribes of Indians beyond had been unfriendly to a white party. That Captain Batte was upon New River, is almost certain, for on his return he mentions having followed a river westward until he reached some salt springs. As New River rises in North Carolina, and flows directly northwest, cutting its way through the Alleghany Mountains, this is more than probable the stream to which he refers. The salt springs (4) must have been those in Kanawha Valley, so we may naturally suppose he and his party were that far West. Captain Batte and party must have been impressed with the country, for on their return they made such a flattering report, that Governor Berkley announced his intention of making an expedition west, which, if carried out, would have been of great service to posterity, since his followers would have preserved ample records of the adventure. For almost fifty years after Captain Batte's expedition, there is no record of anyone's having penetrated west of the Blue Ridge. It remained for the eighteenth century, and one clothed in fine linen, and purple, to make a clear record of an exploration beyond the ethereal peaks of the Blue Ridge Mountains.

In June, 1716, Governor Spottswood penetrated the Blue Ridge Mountains at "Swift Run Gap" with a band of horsemen. From Peyton's Ford on the Rapidan he proceeded by the present site of Stanardsville, passing through the Blue Bidge by way of

(2) It is said Colonel Wood passed the Anvil Cliffs at New River, White Sulphur Springs.

(3) "Trans-Alleghany Pioneers." By J. P. Hale. This work is both painstaking and interesting.

(4) Mr. J. P. Hale, in his admirable work, already referred to, says it was Campbell's Creek salt spring. "Trans-Alleghany Pioneers."

the Gap named above. Crossing the Shenandoah River a short distance below the spot where Shendun now rests, he pushed forward west across Shenandoah Valley until he reached a mountain. Ascending this, he obtained a view of the country beyond, which pleased him immensely. (5) On the return of his party to the east, they gave a glowing description of the weird scenery, and fertile soil. Governor Spottswood, desiring to establish settlers west of the Blue Ridge, created the "Transmontaine Order, or Knights of the Golden Horse-Shoe," giving to everyone a miniature horse-shoe who expressed a desire to cross the mountains, which bore the Latin inscription: "*Sic Jurat transcendere montes.*" But it was not for members of the Order of the "Golden Horse-Shoe" to open up and civilize the Wild West, but a sturdier, and hardier set of gentlemen. (6)

In 1736 Colonel James Patton obtained a patent of land, amounting to 120,000 acres, which he located in that part of Virginia, now known as Botetourt County. With him came his son-in-law Colonel John Buchanan, Mr. William Preston, Mr. John Christian, Ben. Burden and others. Colonel Patton located his lands on James River, in a lovely valley, and two towns subsequently sprang up on opposite sides of the James River, called Buchanan and Pattonsburg, in honor of the founders, Colonels Patton and Buchanan. Both Colonel Patton and John Buchanan were members of the expedition which travelled through the western part of Virginia into Kentucky in the year 1748, when the Gap was discovered in Tennessee, which was afterwards named in honor of the Duke of Cumberland. During their explorations they passed both Cæsar's Arch and Pompey's Pillar on New River, in Giles, and travelled as far as the spot

(5) Gov. Spottswood is reported as having said: "This is God's country."

(6) In 1727, John Van Matre, an Indian trader, from an old Kniekerbocker family on the Hudson, penetrated what was known to the Indians as Wappatomica Valley—now known as the South Fork of the Shenandoah Valley, and on his return home gave such a flattering description of it, that in 1730, his son, Isaae Van Matre, after seeing the country with his brother John, obtained a patent for 40,000 acres from Governor Gooch. Many descendants of this family still live in the Shenandoah Valley. The Rev. W. C. Campbell, the eminent divine of Roanoke City, Virginia, is a descendant of this stock.

Joist Hite purchased a portion of the Van Matre patent, and in the year 1732, with his family, his sons-in-law, George Bowman, Jacob Chrisman, and Paul Frothman with their families; and Robert McKay, Robert Green, William Duff, Peter Stephens and others, came into the valley, settling around and near the spot where Winchester, Virginia, now stands, in lower Shenandoah Valley. This was the first patent of lands west of Blue Ridge Mountains.

where Pembroke Station now stands, on the New River Division of the Norfolk and Western Railroad. Near this point flows the creek, named in honor of Dr. Walker, and which bears the same title to the present day. The object of this expedition was to gain some insight into the country with reference to obtaining a grant; for on their return the "Loyal Land Company" was organized, based on a grant of 800,000 acres, north of the lines of the Carolinas, and west of the Blue Ridge Mountains, and the company was incorporated June, 1749. (7)

The first location we know of in Augusta County, Virginia, was the one made by John Lewis at "Bellefonte," which stood one mile east of the spot where Staunton now stands. The way in which this section happened to become the residence of John Lewis in 1732, is one of the many peculiar ways by which new countries are settled and opened up—the pioneer being driven from the land of his nativity. John Lewis, in 1714, was a resident of County Donegal, Province of Ulster, Ireland, where he owned a leasehold, dependant upon the lives of others. Sir Mungo Campbell, one of his landlords, having become involved in financial troubles, attempted to extricate himself by raising the rents paid by his tenantry in Ireland. This, Lewis refused to submit to, and when a number of persons attempted to eject him, and fired upon his dwelling which was barricaded, he rushed out with a club, and killed both the Lord of the Manor and his steward. Of course, he was forced to flee for his life after this; so, gathering a few necessaries, he wandered over many countries, landing in 1729 at Oporto, in Portugal. There he met a brother engaged in the mercantile business, who advised him to proceed to the United States, promising to send his family after him. In the winter of 1731-32 he was at Lancaster, Pennsylvania, and in the summer of 1732 moved to "Bellfonte," located in Augusta County, where his family joined him afterwards. He was a very prominent man on the frontier, and in 1745 was made one of the Justices of Augusta. Subsequently, he was pardoned, and granted large quantities of land in the section now recognized as West Virginia. He made the survey

(7) The descendants and connections of these families—Colonel Patton's and Colonel John Buchanan's—have thrown out their branches in many directions, having given both Virginia and Kentucky some of their most eminent people, among whom may be mentioned: the Pattons, Prestons, Buchanans, Thompsons, Madisons, Breckenridges, Peytons, Bowyers, Crittendens, and others.

of land in the same county for the Greenbrier Company in 1749-50, naming the river "Greenbrier," because he became entangled in a patch of greenbriers near its borders. (8)

The earliest patent of lands issued in the upper part of the valley west of the Blue Ridge Mountains, was the grant made on September 6th, 1736, by Governor William Gooch. These lands were obtained by: Sir John Randolph, of Williamsburg; William Beverly, of Essex; and John Robinson, of the County of King-and-Queen. They were located within the present boundaries of Augusta County, including the present site of Staunton, and contained 118,491 acres of the most fertile of Augusta's soil. The magisterial district in which Staunton is located is still called "Beverly Manor." The result of this patent being issued was a wholesome one; settlers began to pour in from the lower part of Shenandoah Valley, causing Augusta to increase rapidly in population. At this time Augusta County comprised all the undefined territory of Virginia west of the Blue Ridge Mountains. It continued to hold this vast area of country until 1763, when, by the treaty with France, its western boundaries were limited by the Mississippi River, and its area included the States of West Virginia, Kentucky, Ohio, Indiana, Illinois, Michigan and Wisconsin.

While John Lewis was living in his modest house at "Bellfonte," during the year 1736, he was visited by one Benjamin Burden, a merchant from New Jersey, and agent for Lord Fairfax. He made frequent trips to eastern Virginia, and during one of these was persuaded by Lewis to spend some months in hunting with him. On one of these hunts he caught, and afterwards tamed, a young Buffalo calf, which he presented to Governor Gooch on his return to tide-water Virginia. This so pleased the highest official of Virginia, that he ordered a grant of land to be issued to Burden of 400,000 acres on the upper waters of the Shenandoah and James Rivers. This embraced, when plotted off, the southern portion of Augusta, and the whole of Rockbridge. (9) This land was populated through

(8) Gen. Andrew Lewis, the hero of Point Pleasant, and his brother Charles, killed at the same place, were sons of John Lewis of Augusta. One of John Lewis' descendants married a Miss Tosh, daughter of Thomas Tosh of Roanoke County, and some of the land on which Roanoke City stands was sold by Major Andrew Lewis, and Col. Thomas Lewis, two brothers, who are lineal descendants of John Lewis of Augusta. This worthy gentleman had many other descendants of distinguished fame, who have figured publicly in various ways.

Burden's efforts, who sailed for England, and returned at once with at least one hundred families, among whom were: the McDowells, Alexanders, Moors, Telfords and Mathews. Also, the Prestons, Paxtons, Lyles, Grigsbys, Stuarts, Crawfords, Cumminses, Browns, Wallaces, Wilsons, Caruthers, Campbells, McCampbells, McCues, McKees, and McKowans. Most of these were Irish Presbyterians, of Scotch extraction; and their descendants, having nearly the same family names, are all Presbyterians, and generally spoken of as Scotch-Irish.* They had suffered persecution, and on that account were a clanish set—honest, shrewd, and strongly inclined towards the confession of faith. They are by no means lenient towards what they deem wrong-doing, unless one of their clan is the offender—in him they rarely see anything that is not right. But in nearly all things they are exemplary people, partaking strongly of the characteristics of their original leader, Benjamin Burden. (10) Some of these people pushed their way with their descendants into that section of country adjoining Augusta, and Rockbridge Counties, known as Bath, Alleghany and Craig Counties. Many went from Botetourt to the latter county, whose descendants are still living, possessing the lands originally owned by their forefathers. As the lands in Lower and Upper Shenandoah Valley began to be populated, and the country on James River settled up, the most adventurous settlers commenced pushing their way—first across the "divide," between Roanoke and New River; then farther west into the section now known as West Virginia.

(9) This survey was made by Captain John McDowell, who was afterwards in 1743 killed by a party of Shawnee Indians, near the Natural Bridge in Rockbridge County, Virginia.

*After the fight of Bothwell Bridge in Scotland, numbers of the Scotch fled to the province of Ulster in Ireland, in order to escape imprisonment and death. They dwelt for some time there, but enactments being passed by which they were prosecuted in every way imaginable, on account of their religious faith, they fled to America, at first locating in Pennsylvania. Others were brought over as kind of slaves: having bound themselves to work for such a length of time to pay for their passage across. Colonel James Patton brought many over as an agent, and they located principally in that section, now known as Augusta, Rockbridge and Botetourt Counties. On account of having been connected with Scotland and Ireland both, they were termed Scotch-Irish, and having been drawn together through persecution and adventure, were extremely clamish.

(10) Burden's reputation for honesty was so proverbial, that to express the safety of any financial matter, the settlers said: "as good as Ben Burden's bond."

Among the settlers who came up the upper James with Colonel Patton, and settled in the section known afterwards as Botetourt, were the Drapers. In 1744, George Draper, the head of this family, in company with one Thomas Ingles, and his son William, took a trip westward. Sometime afterwards George Draper went upon a hunting expedition, and never having been heard from again, his family supposed he was killed by the Indians.* The Ingles' settled at Pattonsburg until 1748. After the return of Dr. Thomas Walker and Colonel James Patton from their western expedition in quest of land on which to locate a patent, the latter gave glowing accounts of the valley, beyond what was then known as the Alleghany Mountains, but really the floor of the valley raised, which is now crossed by the Norfolk and Western Railroad between Roanoke and Christiansburg. Led on by the many favorable reports of the soil beyond this mountain, some of the settlers in the section known now as Botetourt, determined to venture there and make permanent settlements. Thomas Ingles and his three sons, Mrs. George Draper, her son and daughter, Adam Harman, Henry Lenard, and James Burke moved outward to cast their fortunes farther west. The following account of this settlement has been already given:

"They chose one of the loveliest spots imaginable for their home—that beautiful and lovely plateau of fertile land on which the site of Blacksburg is now located. Here they erected their rude huts, and residences of logs rough-hewn, naming the place, Draper's Meadows, which was at this time (1748) the only white settlement near the Alleghanies, and the one farthest west. Things went prosperously along with them, and by their encomiums upon the fertility of the soil, splendid scenery, and balmy climate, other settlers were induced to come. William Harbison, (12) George Hoopaugh, James Cull and the Lybrooks, (13) came in, the latter settling on Sinking Creek, below the New

(11) Lewis' History of West Virginia. P. P. 65, 66, 67, 68, 69.

* "Trans-Alleghany Pioneers." By J. P. Hale.

(12) Some of the descendents of William Harbison moved to Kentucky; a portion are now residing in the charming town of Augusta, in Bracken County.

(13) The Lybrooks in Craig County, as well as Giles, and Bland, are descendants of these original pioneers. Some members of the family have been distinguished, notably among whom is Judge Lybrook, one of the four members of the Virginia representatives who occasioned the political downfall of General William Mahone of Petersburg, Va.

River White Sulphur Springs. All were engaged steadily at work in clearing their lands, and making themselves as happy and prosperous as the state of their circumstances would permit. They were on the friendliest terms with the Indians, who passed and repassed the settlement without any hostile signs whatever. At times, joy and festivities enlivened the adventurers, for Mary, one of Mrs. Draper's daughters, had succumbed to the dictations of the God of love, and married William, one of Thomas Ingles' sons. With the exception of one or two small depredations made against Harman, and Hoopaugh, who lived nearer New River than the rest, there was perfect unanimity between the white settlers and Indians. But this pleasant state of affairs was not to continue. On July 8th, 1755, the day before the English army was so ignominiously defeated under General Braddock, the Indians, knowing that the whites were at war with the French, and doubtless instigated by the latter, began a series of raids. They made one upon this peaceful settlement, killing, wounding or capturing every soul. Colonel Patton, (14) Casper Barries, and a child of John Draper were killed, while Mrs. John Draper, and Mrs. Cull, were severely wounded. Mrs. William Ingles (née Draper), Mrs. John Draper, and Henry Lenard were captured prisoners. James Burke would doubtless have shared the same fate, but in 1754, he moved to that portion of the country now known as Tazwell County. (15) Mrs. William Ingles afterwards made her escape, and returned to her family." (16)

She lived many years after this, (17), and a number of her descendents now reside on New River in Montgomery County, near Radford, Virginia, chief among whom is Captain William Ingles, who lives on a portion of the land originally owned by Thomas Ingles, son of Mary, William's wife. (18)

(14) Colonel Patton and Casper Barries were on a visit to the settlement, having come from Pattonsburg (now Buchanan) on the James River, wending their way westward.

(15) James Burke, first opened up, and cultivated a portion of the magnificent valley in Tazwell County, known as "Burke's Garden," which was named after him. Many of his descendants reside there now, and the valley is a synonym for the finest blue grass, and fertility of soil of any county in Virginia.

(16) "South West Virginia and Shenandoah Valley." By Thomas Bruce.

(17) Mrs. Ingles' capture, and escape from the Indians is sad and touching to the last degree. She, with her children, and another lady were conveyed down New River, thence down the Kanawha to the Ohio River, and on to the Indian camps in the Scioto Valley. During the journey she gave birth to an-

Prior to the year 1749, the Greenbrier Land Company employed an astute attorney to frame its charter, and in 1749-50 John Lewis was the party instructed to survey the boundaries of this company. In 1751 the corporation was authorized to locate one hundred thousand acres of land on the waters of the Greenbrier. This country at this time was considered in the wilds of the west, for as yet no human habitation for the white man had been made within its borders, nor permanent settlements located. Hitherto, West Virginia had been the home of the wild beasts alone, the Indians even eschewing it as a place

other child, yet continued her march, exhibiting a nerve and fortitude rarely seen in a woman. While on the trip, by her useful knowledge, adroit acts, and pleasant address, she won the esteem, and respect of the Indians, who proposed gaining a ransom for herself and children, the latter of whom, except her babe at her breast, were torn from her side. Possessing an observant nature, she watched the streams closely going on, and so placed them in her mind, as to remember them distinctly. Her final destination, Big Bone Lick, was reached, at last, in company with only one white woman, and her infant child. Here she made herself very useful in making salt, and shirts for the Indians out of the checked cloth purchased from the French traders. Although some five hundred miles from home, she made up her mind to escape if possible, and communicated her plans to the other woman, who being frightened at the thought, first refused, but afterwards consented. The parting from her infant, which of course she could not carry, on the first blush, might seem to savour of a want of motherly feeling, but it was to save herself from a more degraded fate (had she remained) that she took this step. With only a blanket apiece, and one suit of clothes on their backs, these females plunged into the trackless forest, turning their faces homeward to walk five hundred miles. To detail their various adventures and sufferings; their march up and down the streams; their subsistence on berries, wild fruits, and the productions of the forest; their sore feet, and intense physical and mental suffering, would transgress our space. The companion of Mrs. Ingles threatened to kill her, and she only avoided this catastrophe by crossing to the opposite side of New River. For forty days they travelled, until worn out, and exhausted, Mrs. Ingles passed around the Anvil Cliffs at the New River, White Sulphur Springs, and came to Adam Harman's place, who hearing her cries, sought her out, and took her to his house. After resting there some days, she returned to her family, whose surprise and joy were great at seeing her. The lady accompanying Mrs. Ingles was afterwards found by Harman, and conveyed in safety to a white settlement. "Trans-Alleghany Pioneers," by J. P. Hale.

(18) Captain William Ingles, now residing near Radford, on New River, is the great-grand-son of William Ingles, who married Mary Draper. He has the original MS. written by his grandfather, Thomas Ingles, about the troubles experienced by the early settlers. Very near the spot where Captain Will. Ingles lives, is the old "Ingles Ferry," across New River. Here the pioneers crossed, going westward, and the Ingles' place was quite a *rendezvous* for early settlers passing and repassing, east and west. Captain Ingles has sold a part of the land to a Development Company at Radford.

of residence, on account of its mountainous region. But the time was approaching now, when the Caucasian was to make some of its loveliest valleys his permanent home. In 1769 Robert McClanachan, Thomas and William Renick pitched their tents in this section near Frankfort. McClanachan, who was subsequently killed in the battle of Point Pleasant, located on the northside of Greenbrier River, near Falling Spring, afterwards selling his land to Major William Renick, by whose descendants it is still owned. (19) In the same year Thomas Williams, William McCoy and William Hughart, all located around the spot where Williamsburg now stands. Hughart's Mountain is named for one of these original settlers. In 1770, 1771 and 1772, James Jordan, John Patton, William Blake and Samuel McKinney came in, the latter locating on Muddy Creek, where the Clendennins were murdered, nine years previously. His first neighbor was David Keeney, after whom Keeney's Knob was named. Prior to 1773, William McClung patented a large tract of land in this section, on Meadow River, rearing his rude hut over one hundred miles from either a store or mill. On December 20th, 1777, his son William McClung was born, the first white child who was ever saw light on Meadow River. The father was afterwards joined by his brothers, John and Edward McClung. Anthony District was settled up in 1774, the first person locating being a man named Hatfield. (20) Near the ruins of Fort Donally, and ten miles from Lewisburg, Andrew Donally from whom the fort gets its name, settled in 1774; and 1775, Uriah Jenkins, Frank Ford and John McFerrin became his neighbors, followed in 1776, by William Cavendish, Alexander Ochiltree and James Burns, the two latter of whom were subsequently killed at Fort Donally. In 1778 and 1780 the settlers were increased by the arrival of Anthony Rader, James Kincaid, John Gregory, George Mollahan and Charles Hyde. From this period on, many settlers came into this section of West Virginia, and the country of which we are writing, began to show signs of human life.

(19) Major William Renick's wife was Catherine Madison, a cousin of James Madison, who was our fourth President. After Renick's death, she married Captain William Arbuckle, and spent several years in Fort Randolph at Point Pleasant, and afterwards died on the banks of the Kanawha, at Craig farm, four miles below Buffalo. "Lewis' History of West Virginia, 521."

(20) He is the ancestor of the Hatfield race, whose subsequent feuds with the McCoy's have rendered both families celebrated in this section of country, as well as the borders of Kentucky.

Harrison, Lewis, Upshur, Randolph, Tucker, and the other counties comprising Northwestern Virginia, were about the last part of the territory of west Augusta to be settled. In the first place, the Alleghany Mountains presented what seemed then an impossible barrier to those living east. The dense wilderness, narrow defiles, and uncleared valleys, were not only uninviting as a place of residence, but afforded ample covering to the treacherous acts of the Indian, the common foe of every white settler at that time. But the spirit of adventure, and desire to seek new fields that pervaded many of the early pioneers, led some settlers from both the Ohio Valley and the eastern district of Augusta, to attempt a penetration of the wilds. (21) The first persons to execute so daring an undertaking were old trappers and frontiersmen, animated with a spirit for exploring new fields. David Tygart and William Files, accustomed daily to the howl of wild beasts, and the savage warfare of the wily Indian, penetrated in 1754, with their families, the uninhabited region along the banks of the east fork of the Monongahela River. After some examination of the country, spots were chosen for residences. Files located at the mouth of a creek that still bears his name, while Tygart settled some miles farther up on the river, that is called "Tygart's Valley River" to-day in his honor. But their settlements were of short duration. The scarcity of food, coupled with the contiguity of the Indians, rendered existence so precarious, they determined to retrace their footsteps. But this was not accomplished before Files' family fell from an attack made by the Redskins as they were on the eve of moving. (22) Shortly after this, Doctor Thomas Eckerly, with several brothers, immigrated from Pennsylvania. Being Dunkards, and pitching their camps near the mouth of a creek, eight or ten miles below Morgantown, the stream was

(21) During the late civil war, in this region of the country, the sentiment was greatly divided. Many counties furnished companies on each side—the Federal and Confederate. It has been a matter of surprise to some, that people living together should have been so divided in sentiment. The reason is obvious, when we regard the mode in which the country was settled. The north-western part of the State of Virginia (now a portion of West Virginia) was settled by people pouring in from three different points—north, east and west. These transmitted different views.

(22) History is silent as to the identity of William Files, or his original domicile. David Tygart came from east Augusta, now Roekbridge County. As both men came from the east, ahead of civilization, it is not unreasonable to conclude that Files was from that region too.

afterwards termed "Dunkard's Creek." Although a destructive war was waging at the time between the whites and Indians, these people were unmolested for two or three years, but at last their settlements were burned, and they were compelled to return east. In 1758, Thomas Decker, in company with a small party, attempted a settlement on the Monongahela River, at the mouth of Decker's Creek. But in the following spring it was broken up, by the combined attacks of the Delawares and Mingo, and a large portion of the inhabitants murdered. Correctly speaking, these are the only attempts at settling North Western Virginia before the close of the French War. Although the capture of Fort Du Quesne, and garrisoning of Fort Pitt gave the English an ascendancy in that quarter, it did not check the hostile attitude of the Indians, consequently, a further settlement of this section of West Virginia was not attempted until the restoration of peace in the year 1765.

The fertile country along the Ohio River in West Virginia, as elsewhere, was a bone of contention between the English and the French. A squabble of these two nations over this particular territory caused its first settlement. Through Jesuitical priests of the Holy Catholic Church, France had become acquainted with this intermediate section, the possession of which west of the Alleghanies meant a means of uninterrupted communication between her possessions north, and those held south on the Mississippi River. To assert her claim to this country, and gain the Indians as allies, France established a number of trading posts, and to maintain and preserve her right, prepared to erect a chain of forts extending from Canada to Louisiana. England, deeming such acts on the part of France as an illegitimate usurpation of the territory, prepared to resist it. A company was formed, called the "Ohio Company," to which the power was given to locate 600,000 acres of the land in the disputed territory. The English proceeded to have the country surveyed—located several trading posts, and the influx of people in consequence of this, caused permanent settlements along the Ohio, in West Virginia, where forts, known then as blockhouses, were erected. This was in the year 1754-55. It was about this time that the Thorntons, Spencers, Parkers, Smiths, and others located claims in Wood, Jackson and Mason Counties along the Ohio, although they were not all residents of the place at that early date. Thus, at this period, Central West Virginia lay uninhabited between

the people of Virginia, east of the Alleghany Mountains, and those on the Ohio River. The echoes of musketry and artillery, during the Braddock campaign, fell upon the wilderness of forest in the centre unheeded. The border warfare that painted the east and west trail red with the blood of the Caucasian and Indian, left this country untouched, until the peace established between the beligerent parties, through the instrumentality of Col. Bouquet, in the year 1765. After this time, during the next ten years, settlers from the east, as well as west, and Pennsylvania, pushed their footsteps into this section of country of which we are now writing—the interior.

After this treaty, comparative peace and quiet reigned. It was not deemed necessary to reside at all times in forts or block houses. Being no longer compelled to cultivate their fields in common, with the tomahawk, and bow and arrow suspended over their heads, the spirit of adventure took the place of that of war, and during the continuance of this exemption from the haversack and musket, various settlements were made both on the Monongahela and Ohio Rivers. Among the soldiers garrisoned at Fort Pitt were two brothers, Samuel and John Pringle. Of adventurous dispositions, they entered the interior to find their way to the inhabited part of Virginia. They reached the farthest western settlement, and remained there some time. Living in fear of being apprehended as deserters, they determined to retrace their footsteps, and during this latter expedition ascended a branch of the Valley River, now known as the Buckhannon River. In company with them was one Simpson, a fur trader. After having crossed Cheat at Horse Shoe, a quarrel arose between one of the Pringles and Simpson, that caused the latter to separate himself from the brothers. Crossing over Tygart's Valley River from the others, he proceeded westerly until he reached a stream he called "Elk River." The Pringle brothers followed up the Valley River until they came to a large fork, and proceeding up as far as Turkey's Run, took up their abode in the cavity of a large hollow tree. Here they resided for some two years, when John Pringle left to reach a trading post on the Shenandoah. On his return, he brought the news of peace between both French and Indians with the English. Then both brothers determined to return to the nearest habitations.

Through their accounts, settlers were induced to explore

this new country. In the autumn of 1768, Sam. Pringle took several people out with him on an exploring expedition. These, pleased with the general aspect of the country returned with others in the spring, and began clearing for the purpose of raising grain to carry them through the winter. John Jackson, with two sons, located at the mouth of Turkey Run, where it flows into the Buckhannon. John Hacker placed his hut higher up the Buckhannon River, where Bush's Fort was afterwards established, and Alexander, and Thomas Sleeth settled near by, on what was afterwards known as the Forenash plantation. The rest of the party were, William Hacker, Thomas and Jessie Hughes, John and William Radcliff, and John Brown. (23) Soon afterwards other emigrants arrived, taking up lands around; John and Benjamin Cartright settled on Buckhannon River. Captain James Booth and John Thomas established themselves on Booth's Creek, near the Monongahela River. The former lived on the estate afterwards owned by the Martins—probably one of the finest landed estates in the country. Jacob Van Meter, John Swan, Thomas Hughes, and others, settled on the west side of the Monongahela River, near the mouth of Muddy Creek. The spot formerly occupied by Thomas Decker, was subsequently taken by David Morgan, whose daring deeds of prowess, and capacity for fighting, made him a conspicuous figure even in those days. The town of Morgantown, named after him, stands on the ground occupied by him, and his brother pioneers. In 1769, the Zanes settled up the country around Wheeling. In 1772, the beautiful country lying on the East Fork of the Monongahela River attracted a number of settlers from Greenbrier and other sections through accounts given of it by trappers and hunters, who had traversed it. Among the first were the names of Hadden, Connelly, Whiteman, Warwick, Nelson, Stalnaker, Riffle and Westfall, who eagerly, with others soon took up nearly all the level plateau, some fifteen or twenty miles between the mountains. Cheat River began to be looked after. The Horse Shoe bottom was settled by Captain James Parsons, of the South Branch, and soon, Robert Cunningham, Henry Frick, John Goff, and John Minear followed. William Morgan, and Robert Butler occupied Dunkard's bottom. James Anderson, Jonas Webb, and John Powers took up lands on Elk River, as well as West Fork. In the vicinity of Clarksburg,

(23) "Chronicles of Border Warfare." By Willis.

Thomas Nutter, Sam. Cottrail, Sotha Hickman, Samuel Beard, Andrew Cottrail, and others pitched their tents. Daniel located where Clarksburg now stands, while Obediah Davisson, and John Nutter placed their camp on the banks of the West Fork. Settlers began to pour in now, and so rapid were the settlements in the country tributary to the Buckhannon River, and Hacker's Creek, that sufficient food was not on hand to supply them, and but for the untiring, and successful efforts of William Lowther, starvation might have stared them in the face, (24) Such were the principal settlements in this section prior to the war of 1774, which were few and far between.

Until the year 1774, these early settlers augmented in numbers constantly, by others coming in, cleared the lands, and made small crops for their subsistence. As they increased in power and numbers, counties were laid off and law established. They had taken the initiatory step for gaining permanent houses for their descendants who were to inherit their land. There can be but little doubt of the fact, that from their courage and powers of endurance, these early pioneers were a sturdy, enterprising set. They first gave battle to the roaring beasts, and crawling reptiles of the forests; then stood in gallant array against the countless ranks of the savage and the barbarian; and lastly, fought by the sweat of the brow the boundless forests, the ills of nature, and the soil they had won, for a scanty livelihood. Had more of their spirit of exertion, pluck and energy been transmitted to the succeeding generations, this section would have blossomed like the rose ere now. For some years after Colonel Bouquet's treaty, peace reigned, but in 1774, it was obscured by the clouds of war hanging here and there over the horizon, until they gathered in one black mass, and the storm culminated at Point Pleasant on the Ohio River.

(24) William Lowther, who played such a conspicuous part in these perilous times left a name renowned for courage, integrity, and self-sacrifice. He was the son of Robert Lowther, and came with his father in the year 1772, to the Hecker Creek settlement. During the war of 1774, and subsequently, he distinguished himself by his sturdy courage, and strong resistance to the border raids of the Indians. He headed nearly every scouting party that went forth to attack the Indians, and left to posterity a reputation crowned with the laurels of true courage, unselfishness, and manly generosity. He was the first Justice of the Peace for West Augusta District; the first sheriff in the County of Harrison and Wood, and a member of the General Assembly.

CHAPTER II.

War between the White Settlers and Indians.—Causes which led to it.—Indian Raids upon the Settlers.—Difficulties between the English and French.—Treaty of 1763.—Col. Bouquet's Expedition.—Sir William Johnson's Treaty of 1765.—Captain Cresap's Party.—Daniel Greathouse's Attack upon the Indians.—Exasperation of the latter.—Gen. Andrew Lewis.—His Expedition.—Lord Dunmore's Movements.—Battle of Point Pleasant.—The Result of the Same.—Its Effect upon the Indians.—The Indian Chieftain Logan.—The Murder of Cornstalk and others.—Increase of Emigration Westward.—The Indians move farther West.—Peace reigns.

The early settlers of the country, of whom much has been said, did not succeed in effecting their settlements, and making homes west of the Blue Ridge and Alleghany Mountains, without difficulties and warfare. When they began settling west at first, the Indians not divining wholly their object, and having their curiosity excited, viewed the newcomers at first with friendly looks, exchanging visits as well as commodities. But when their minds grasped the idea at last that it was the purpose of the whites to permanently hold their lands, they evinced a hostile attitude, that soon resulted in petty and harrassing raids, a kind of warfare as exasperating as it was dangerous. The Indian is, by nature, treacherous and revengeful; his idea of war consisted in not only a secret extermination of his enemies, but their wives and children as well. Attack after attack was the result of their hostility on the settlements *seriatim*, but always retreating whenever the place attacked called in some neighboring block-house to assist in the defense. In this system of warfare the Indians had the whites at a decided disadvantage, for the former being of a roving disposition, and accustomed to the rugged mountain passes, rushed in suddenly upon a fort, and after committing their depredations, retreated with such rapidity that they were soon lost in the defiles of the rough, rugged hills with which the white settlers were unacquainted. After the hostility of the Red man was aroused, the

early inhabitants had to dispute inch by inch with them over the territory the latter acquired. (1) In connection with the white race there is a distinguishing characteristic in all their methods of warfare in the last century. They never kill the defenceless, such as women and children, nor make unnecessary, stealthy attacks upon a peaceful household. But the superiority of the Caucasian caused itself to be felt in the struggle with the Indians, as it had done in days gone by with other races, and at last the whites remained undisputed victors of the field. While it is not possible for the historian to give recital of every small raid made by the Indians upon families as individuals, or relate every hand-to-hand combat that occurred, still it is his duty to give a patient investigation of the causes that led to the decisive action which finally determined the result. (2) And while the war between the early settlers and the Indians was decided in almost a single pitched battle, yet the minute description of the causes and results of this fight are as important as if a hundred battles had been fought, or the war waged for years.

The causes which lead to the celebrated battle of Point Pleasant may be said to be three. The disputes between the English and French over territory; Colonel Bouquet's expedition into Ohio; and the killing of Logan's family by Captain Cresap and Daniel Greathouse.

The dispute between the French and English originated over the conflicting claim of the two nations to the same territory west of the Alleghanies. By virtue of the discovery of John and Sabastian Cabot, in 1498, of the Virginia Territory, England claimed all the territory east of the Mississippi River, while France through the fact that some of her citizens had gone over the territory claimed it also. This nation further claimed that the Ohio, and Mississippi Valleys belong to it through the dis-

(1) Concerning this raiding warfare, Mr. John P. Hale in his work, "Trans-Alleghany Pioneers," on page 178, has this to say:

"After the treaty of 1763, between the English and French, the French were out of the way of settlements, but their savage allies, whom they had instigated and encouraged to resist the encroachment of the white settlers upon their territory, were still there to dispute every advance upon their happy hunting grounds; and, although the march of settlement continued steadily westward, every pioneer trail was a trail of blood, and every pioneer family numbered among its members victims of the tomahawk and scalping knife."

Mr. Hale is a lineal descendant of the Ingles' of Draper's Meadows, who were raided in 1775, by the Indians, when all were killed or captured.

(2) For a graphic description of many of the atrocities committed by the Indians on individuals, the reader is referred to "Trans-Alleghany Pioneers," by John P. Hale, and "Lewis' History of West Virginia."

covery of La Salle, Marquette and others. It seems that numerous Jesuitical priests from France had crossed the ocean with the object of christianizing the savages in America. These priests made themselves acquainted with the country from the northern lakes to the southern gulf, and from the mountains on the east to the lakes of the woods on the west, besides making maps of the country, which with Canada, they called, New France. It was these proselyting Jesuits who first descended the Mississippi River, and discovered the Ohio River. On this account it is claimed by some that France was entitled to this territory by right of discovery—a right recognized by all nations. (3) But England failed to acknowledge this right to France, and prepared at once to assert her claim. George II., then the ruling Monarch of England, ordered the Governor of Virginia to issue a grant of land of 500,000 acres between the Great Kanawha, and Monongahela River to a company. This was done in March, 1749. The company was to pay no quit-rents for ten years; to colonize within seven years at least one hundred families, and to survey at least two-fifths of their land, and at their expense to construct a garrison and fort. Christopher Gist was brought from North Carolina to survey these lands, and in so doing took his memorable trip into a section of country never before traversed by a white man. He made the survey, but before the required colonization of the lands could take place within the limited time; or, the charter extended,

(3) Mr. Lewis, in his "History of West Virginia," distinctly asserts that France was entitled to this territory. He writes: -

"Champlain, the founder of Quebec, was accustomed to say: 'The saving of a soul is worth more than the conquest of an empire'; and such was the faith of the men who first bore the standard of civilization to the Mississippi Valley and the distant shores of Lake Superior. As the years sped away, these enthusiasts laboured on in an effort to secure the accomplishment of their cherished object—the conversion of Canada. The raging tempest, the rigours of an Arctic winter, hunger, the tomahawk, nor fear of death, deterred them from the prosecution of their self-imposed task—that of saving Canada for the church. Such were the first white men within the present limits of Ohio, Indiana, Illinois, Michigan, Wisconsin, and Missouri * * * * * They drew maps of all this region, which together with Canada was called New France, and had won there to a title based upon discovery." * * * * *

It seems to one who is acquainted with rights accruing from discovery, that England's priority of claim over France was clearly established. Long before these missionaries ever came to America; long before they ever discovered the Ohio River or the territory, referred to by the learned author of the "History of West Virginia", England had discovered the eastern part of the territory, and planted her colony there. It was a part of the whole land, for she claimed from ocean to ocean, under her discovery, and colonization. Actual possession of part means constructive possession of the whole, and the claim of France was but an intrusion.

the declaration of independence put an end to the proceedings of the Ohio Company. (4) It was the avowed object of this company to form a separate government west of the Alleghanies, but that, too, was for the present frustrated. In the year 1749, England followed up her claims to this territory by ordering the Governor of Virginia to organize "The Loyal Land Company," with a grant of 800,000 acres of land extending northward from the Carolinas. To gain an insight into the country where this land lay, was the object of the memorable exploration of Dr. Thos. Walker, and the brave Colonel James Patton. (5) In 1751, the Greenbrier Company was organized with a grant of 100,000 acres of land west of the Alleghanies, which was surveyed and meted off by John Lewis, from Augusta County, Virginia.

These acts of ownership exercised by England, alarmed France. In the middle of 1749, she too began a practical assertion of her claims, by sending a company along the Kanawha, Ohio, and other rivers, to designate her boundary. This was done by means of leaden plates sunk at various points along the streams. This expedition set out from Montreal in 1749, and buried the first plate at the mouth of the Conewago; the second was buried at the mouth of French Creek, and moving down the Ohio to Wheeling Creek, the third was put down. The fourth was placed at Muskingum River, the present site of Marietta, Ohio. Proceeding onward, they passed Little Kanawha, and reaching the mouth of Great Kanawha, sunk their fifth plate. (6) About August 31st, the French party passed the

(4) The Ohio Company was composed of twelve members, all of whom were residents of Virginia and Maryland, except a merchant of London, named John Hamburg. Among the members were Lawrence and Augustine Washington, George Mason, John Mercer and John Dinwiddie, the latter General Surveyor of the Colony. Colonel Cresap was from Maryland.

(5) There is no doubt of the fact that to see about these lands was the reason of Colonel Patton's expedition. He, with Dr. Walker and others, made the exploration in 1748, and on their return, in 1749, the company was organized.

(6) One of these plates was taken up in the year 1846, by a son of John Beale in Mason County, Kentucky. It fell into the possession of James M. Laidley a member of the General Assembly from Kanawha, and was taken by him to Richmond, Virginia, where it is now preserved in the care of the "Virginia Historical Society." It bears the following inscription:

"In the year 1749, reign of Louis XV. King of France, We, Celeron, commandant of a detachment sent by *Monsieur the Marquis de La Galissouiere*, Commandant General of New France, to re-establish tranquility in some Indian villages of these cantons, have buried this plate at the mouth of the river Chinodoshiehetha, the 18th of August, near the river Ohio, otherwise Beautiful River, as a monument of renewal of possession, which we have taken of said River Ohio, and of all those which fall into it, and of all the lands on both sides

Great North Bend of the Ohio River, reaching the mouth of the Great Miami, where they buried their sixth and last plate, claiming then all right to the territory. The next step taken by the French, was to place themselves in a position to maintain their claim to the territory in dispute. In 1753 they came southward from Canada, constructing a *cordon* of forts, from Lake Erie to the Ohio River. The first of these was placed at *Presqu' Isle*, now known as Erie, while another was located at Venango, called Franklin in later days, and a third between the two mentioned, Le Boeuf, now Waterbury. On learning of these proceedings, the Governor of Virginia attempted to stop them by the use of diplomacy. General George Washington, at the time but twenty-one years of age, was chosen to undertake the delicate mission of communicating with the French authorities. Christopher Gist, Jacob Van Braam, a French interpreter, Davidson, the Indian interpreter, William Jenkins, Henry Stewart, Barnaby Currien and John McGuire, were his companions, and the whole party proceeded to the Ohio Valley. Venango, the most southern outpost of the French, was reached on December 4th, and learning there that the French commander's headquarters were at *La Boeuf*, Washington pressed forward, and on reaching Le Gardeur de St. Pierre, he delivered Governor Dinwiddie's message. St. Pierre as courteously agreed to forward the message to the Governor General of Canada, as he firmly refused to make any concessions, saying his orders were to hold the country, which he intended doing. Washington having performed his duty, returned with his companions to Virginia. (7)

On learning of the ultimatum of the French, Virginia rose in arms to carry the point for her mother country. Capt. William Trent speedily collected a company of Virginia pioneers among the Hampshire Hills; crossed the mountains, and in January, 1754, began the erection of a fort at the forks of the Ohio. But on the 16th of January a force of French and Indians appeared on the scene, and *Coutreccour*, the French commander, sent a summons to surrender. Owing to the superiority of the French

as far as the sources of said rivers; the same as were enjoyed, or ought to have been enjoyed, by the preceding kings of France; and that they have maintained it by their arms and by treaties, especially by those of Ryswick, Utrecht, and Aix-La-Chapelle." See "Lewis' History West Virginia," page 81-82.

(7) This was the first public service performed by Washington for his State. He was twenty-one years of age at that time, and held a commission in the army as major of a regiment.

and Indian force, Captain Trent knew that resistance would be worse than useless, so he capitulated, and marched up the Monongahela, leaving the enemy in possession of the unfinished fort. This they completed; and named it Fort Du Quesne, in honor of the Marquis de Du Quesne, then Governor General of Canada. (8) In the meanwhile, Washington collected a force near Harper's Ferry, and proceeded westward; and hearing of the disaster at the forks of the Ohio, halted and constructed Fort Necessity. The French advanced upon this, and an engagement took place on the 28th of May between the vanguards of the armies, that resulted in a loss of ten to the French forces, among whom was M. La Jumonville. On the fourth day of July, the French came again with a larger force, attacking the English, and Gen. Washington surrendered Fort Necessity, retreating in discomfiture to Wills Creek. The year 1754 closed with the French in complete possession of the Ohio Valley.

But a war was inaugurated in 1755, which was to change the geography of a whole continent, and mould the future destiny of nations. Smarting under the loss sustained at the forks of the Ohio, and the capitulation of Fort Necessity, England sent troops over in the winter of 1755, under command of General Edward Braddock, who, on the 20th of February, cast anchor in Chesapeake Bay, with 1200 strong. The French, about the same time, sent a fleet across, two ships of which were captured off the coast of Newfoundland by British men-of-war, under command of Admiral Boscowan. The troops which came with General Braddock were the 44th and 48th Royal Infantry, under the respective commands of Sir Peter Halkett and Col. Thomas Dunbar. Proceeding up the Potomac from Alexandria, they passed through the counties of Jefferson, Berkley and Morgan, of West Virginia, until Fort Cumberland was reached, now Cumberland City, Maryland, where about one thousand Virginians from Shenandoah Valley joined Braddock, when the whole command moved forward into the trackless wilderness, bent on the reduction of Fort Du Quesne. Soon the command was divided; the General advanced with 1200 chosen men, leaving Col. Dunbar with the heavy artillery and baggage to follow on as rapidly as possible. As General Braddock's army pro-

(8) This fort, when recaptured by the English, was named Fort Pitt, in honor of William Pitt, then Prime Minister of England. It was the place where the present populous city of Pittsburg, Pa., is now located.

ceeded westward, scouts carried the intelligence forward to Fort Du Quesne, and *Beauzeau*, against *Coutrebourg's* advice to retreat, advised his superior in command to give battle to the English; to this effect, at the call of the French, Indian chiefs gathered together a force of 600 men of their nations, which, with 250 Frenchmen, departed from Fort Du Quesne to meet the English. On the 8th of July the English reached the Monongahela, and crossing the same the following day, formed into ranks on the level plateau, when the order was given to march forward to Fort Du Quesne, some ten miles distant. The troops were scarcely in motion, when Gordon, one of the engineers, saw the French and Indians bounding forward through the forest, who at once opened a deadly fire upon the English troops, that was returned by the latter with such deadly effect, that the French leader was shot dead. Dumas, second in command, rallied the French, and for three hours a destructive fire was kept up that played havoc among the English army, owing to General Braddock's deployment of his forces on the field of battle. Of the 1200 chosen men, crossing the Monongahela, sixty-seven officers, and seven hundred and fourteen privates, were either killed or wounded. When the French and Indians met Dunbar with the artillery and baggage, he was completely routed, and the straggling forces retreated to Cumberland, Maryland, from which point the remainder of the English army marched to Philadelphia and Washington. General Braddock was killed, his death being caused by his own improvident act and rash violence. (9) The campaign of 1755 left the French, through the assistance of the Indians, still in possession of the disputed territory. The news of General Braddock's defeat was the signal for the beginning of merciless raids by the Western

(9) During this fight, it seems that General Braddock deployed his forces just as if he was upon an English field of battle, rallying them again and again into platoons and columns, while the enemy took advantage of the trees and other obstructions as breastworks. The Virginia forces with Braddock, being accustomed to the same mode of warfare, took shelter also behind the trees, which raised Braddock's displeasure. In a Virginia company there were two brothers, Joseph and Thomas Fausett. The former, in defiance of Braddock's absurd command not to protect himself, got behind a tree, when Braddock rode up, and struck him down with his sword. The other brother who stood by, witnessed the transaction, and shot Braddock through the lungs. The General died in four days, and was buried near Fort Necessity; but his remains were afterwards disinterred and carried to England and laid in Westminster Abbey.

Indians upon the frontier settlers. So much for one of the causes of the war between the Indians and whites.

The Indians now waged a continual war along the borders. During 1757, 1758, 1759 and 1760 they committed depredations and murders of the most revolting kind: white men were captured and scalped while peacefully pursuing their occupations; women and children were killed in the most brutal manner, the latter being often brained against trees; property was wantonly taken and destroyed, until in the year 1763, the settlers in self-defense appealed for help to prevent further destruction of life and property. A thousand families had been either murdered, or driven from their homes on the frontiers of Pennsylvania and Virginia; and, since the treaty of *Fontainebleau*, by which Canada was ceded to the English, the dissatisfied French remaining within the borders, instigated the Indians as much as possible against the English settlers. The necessity for assisting the settlers, caused an expedition to be sent out under Colonel Bouquet, who was a Switz by birth, but had served gallantly in the English army. In 1764, he marched from Philadelphia, and with five hundred men, fought a fiercely-contested battle at Bushy Run, Pennsylvania, in which he completely routed the Indians. Augmenting his force after this to 1500 men, he proceeded by way of Fort Pitt into Ohio, and marching into the wilderness reached the forks of the Muskingum, where he concluded a treaty with the Indians, recovering some two hundred and sixty white captives, who had been taken from the frontiers of Virginia and Pennsylvania. (10) While as a temporary cessation of hostilities, and as a means of recovering the white prisoners from the Indians, Colonel Bouquet's expedition, was a success, as a measure for preventing future hostilities, it was a failure. Had his force, instead of making this treaty, made fierce war upon the Indians, and given them a sound chastigation, there would have been a retreat on their part such as took place at the battle of Point Pleasant—a most affective

(10) Colonel Bouquet, commanding this expedition, was a native of Switzerland, born in the Canton of Berne. By birth he was a soldier. He spent his early life in the Scandinavian army, afterwards serving in that of the Dutch Republic. In 1755, the Duke of Cumberland organized a regiment destined for America, in which Colonel Bouquet entered as Lieutenant-Colonel. He served throughout the war against the French, and at the time he was ordered west by Sir Jeffrey Amherst, was stationed at Philadelphia. It is to be deplored on account of the future, that General Lewis was not put in command of this expedition.

and permanent one. Colonel Bouquet returned to Fort Pitt with his army, and treaty of peace, the latter of which was totally ruptured afterwards, when the flames of war broke out again.

This treaty was kept for a number of years, lasting until 1774, when it was torn asunder by some Indians being killed at Captina and Yellow Creek. Many chroniclers of events of that time expressly assert that it was broken at first by the whites. (11) In the spring of 1774, a white man in a trading-boat was killed, some distance from Wheeling Creek. (12) This act was committed by the Indians. Early in April a party of Indians were surprised and attacked by Captain Cresap and others at the mouth of Captina Creek. (13) During the same month some Indians who lived in Logan's Camp, near the mouth of Yellow Creek, on the

(11) Lewis, in his history of West Virginia, distinctly asserts that the treaty was broken first by the whites, and enumerates what he deems the causes: the murder of several Indians near Harper's Ferry by Harpoid and his associates; the murder of Bald Eagle, an Indian chief; the murder of Captain Bull, an Indian chief, on Little Kanawha River; the murder of the Indians by Captain Cresap and party; and the killing of Logan's family by the Great-houses and Bakers. Mr. Lewis assigns no cause for these murders on the part of the Indians. See "Lewis' History West Virginia, pp. 114-15-16.

Dr. Doddridge, in his history of Lord Dunmore's war, says the killing of the Indians was murder on the part of the whites; that the latter had no right whatever to attack the Indians for taking their horses, which, as a matter of fact, was not true; and that the action of the white settlers was unwarranted, and deserving of retaliation. "Doddridge's History of Lord Dunmore's War."

In speaking of the killing of these Indians, Lewis, in his "History of West Virginia," says on page 114:

"Here was sufficient cause for retaliation, and it came only too soon,"

With all due deference to both Mr. Lewis and Dr. Doddridge, there is but little doubt that the origin of the affair is as represented by John P. Hale, in "Trans-Alleghany Pioneers." See note 12.

(12) Mr. John P. Hale, in his admirable work, "Trans-Alleghany Pioneers," on page 179, says:

"About this time, several murders were committed on the Upper Ohio. A white man in a trading-boat was killed by Indians some distance above Wheeling Creek; within a few days, early in April, Captain Michael Cresap and party killed two Indians, near Wheeling, in a canoe, and followed a larger party down the river to the mouth of Captina, where they were surprised in camp, and nearly all killed."

Mr. Hale proceeds further, and details other murders following of both whites and Indians. On account of the spirit of retaliation which existed between the two races; the bad feelings harbored, one murder was sure to follow another, and as Mr. Hale relates, doubtless the list of murders that led to the war proceeded from the killing of the white man in a trading-boat, near or above Wheeling Creek, by an Indian.

(13) The Rev. John J. Jacob, Captain Cresap's biographer, states that his hero was not present at the massacre of Captina Creek. John Sappington, in

opposite side of the river from one Baker's, went across to the latter's for the purpose of purchasing rum, which was kept for sale there. In the midst of a drunken spree, an Indian and white man became involved in a difficulty, in which the Indian, who was a brother of Chieftain Logan, was killed, and a general fight ensued that resulted in the death of several Indians and whites. Among the former, both at Captina and Yellow Creek, were almost all the members of Logan's family. The result of affray led to another border warfare, and the Indians became so aggressive along the frontier—particularly along the Ohio, that the settlers deemed it necessary to call in the assistance of the Government. Tidings were carried to Lord Dunmore at Williamsburg, who ordered a force to be raised under Colonel Angus McDonald's command, who was born of Scotch parentage, and resided near Winchester, in Frederick County, Virginia. This work was but a preliminary movement to Lord Dunmore's war that was prosecuted later on in the year. Colonel McDonald ransacked the Indian towns in Ohio, and destroyed many of their villages; at last returning to Virginia, he brought several chiefs as hostages. (14)

Later on the Indians being bent upon a general border warfare, the frontier settlers became alarmed, and through Cresap and Connally messengers were sent to Williamsburg, apprising Governor Dunmore of the danger. His Excellency, realizing the situation of the colonists in the west, sent for General Andrew Lewis, with whom he consulted, and mapped out the route of a campaign against the Indians. (15) They decided to raise an army of two divisions, one to be commanded by Lord Dunmore; the other by General Lewis. The latter, with the assistance of his brother, Charles Lewis, from Augusta, who was a colonel of a regiment, raised an army from Augusta, Botetourt, and Fincastle Counties, while Lord Dunmore's was assembled from

his affidavit made in 1800 in Madison County, Virginia, says: the Greathouses, and not Captain Cresap, killed the Indians. But a letter of Cresap's written to the Bakers, indicates guilty knowledge.

(14) As has been stated, Colonel August McDonald was of Scotch extraction. He resided near Winchester, Frederick County, Virginia, on an estate early acquired by his ancestry, and which has been known locally for more than a century as: "Glengary," so called from the name of the clan to which the McDonalds belonged in the highlands of Scotland. Many of his descendants reside in the valley.

(15) General Andrew Lewis, son of John Lewis, of Augusta County, was then a member of the House of Burgesses for Botetourt County, Virginia,

Frederick, Shenandoah and adjacent counties. All the western regions were notified of the approaching danger, and ordered to prepare themselves. About September 1st, General Lewis' army *rendezvoused* at Camp Union, known now as Lewisburg, Greenbrier County. It was agreed between the two generals that Lewis should go to the mouth of Kanawha River from his camp; while Lord Dunmore took the northwest route over the old Braddock trail, by way of Fort Pitt, and join the former at the mouth of the Great Kanawha. On September 11th, General Lewis broke camp, and with Captain Mathew Arbuckle, an experienced frontiersman, as guide, he set out with his army of 1,100 men for his destination. After a march of some nineteen days, by way of Muddy Creek, Keeny's Knob, Rich Creek, Gaultey, Twenty Mile, Bell Creek, and Kelly's Creek, along the Indian trail to Kanawha, and down Kanawha to its mouth, he reached Point Pleasant on the 30th day of September after a fatiguing march. (16) He waited anxiously here for several days expecting Lord Dunmore. (17) The latter was to have joined him by October 2nd. Hearing nothing from him, Gen'l Lewis dispatched some messengers up the Ohio River to meet him, or learn what had become of him. However, before they returned, three messengers arrived at Lewis' camp on Sunday the 9th of October, with orders from Lord Dunmore to cross the river and meet him before the Indian towns in Ohio. On the morning of the 10th, General Lewis give orders for the camp to

(16) Baneroff's description of the march of the army is really beautiful. He writes:

"At that time there was not even a track over the rugged mountains, but the gallant young woodsmen who formed the advance party moved expeditiously with their pack-horses and droves of cattle through the home of the wolf, the deer, and the panther. After a fortnight's struggle they left behind them the last rocky masses of the hilltops, and passing between the gigantic growth of primeval forests, where, in the autumnal season the golden hue of the linden, the sugar-tree, and the hickory, contrasted with the glistening green of the laurel, the crimson of the sumac, and the shadows of the sombre hemlock, they descended where the Elk widens into a plain."

(17) Many have beeu the theories and speculations why Lord Dunmore should have gouc directly across the Ohio River into the Indian territory without joining General Lewis at the mouth of the Great Kanawha, as formerly agreed upon. These speculations afterwards drifted into charges against Lord Duunore, of planning, during this march, the destruction of the colony of Virginia, because it was resisting the encroachments of England upon its rights and liberties. From most of the disjointed, rambling writings of the time, it is clearly seen that Lord Dunmore's loyalty is attacked on the following grounds: he was an Englishman; at this time the Joint Assembly was passing measures condemning England's encroachments; that he did not join Lewis, and had Cornstalk's original plans been carried out, Lewis' army would have

be broken up, purposing to follow Lord Dunmore's orders, and move into Ohio; but at the hour of starting, his progress was checked by an army of a thousand Indian braves, commanded by their trusted leaders: Cornstalk, Logan, Red Hawk, Blue Jacket, and Elinipsico.

It appears that the Indians were stationed on the opposite side of the river from General Lewis, waiting for him to cross, and then ambush him nearer their own homes, and out of his territory. This plan would doubtless have been executed as Cornstalk the chief laid it down, but General Lewis' delay, occasioned by waiting for Lord Dunmore, interfered with the plans of the Indians. The latter not having a full supply of rations to last so long, had to make a change of base; they either had to make an attack upon Lewis, or else go and hunt for food, leaving their country at the mercy of the enemy. On the night of the 9th, they constructed a crossing of rafts, upon which they transported their army, intending to surprise Lewis early in the morning. But about daylight it seems that a party of hunters went out from Lewis' camp for game, and discovering the approaching Indians, returned just in time to give the alarm before the Indian army confronted General Lewis' in full battle-array.

It was but a short time after the two armies met before the whole scene was one of carnage and blood. Here, on the banks of the beautiful Ohio, sweeping gently down with an easy current as it drank in the waters of the Kanawha flowing from the rugged mountains; here, in this lonely valley, that stretches away on each side to the wooded hills, was fought one of the bloodiest battles ever chronicled in history, or known among nations—the never-forgotten battle of Point Pleasant. The deadliest animosity existed between the two armies; revenge, hatred, and malice actuated one side, while the view of lost wives, brained children, and homes destroyed, burned in

been ignominiously routed. For those reasons, John P. Hale, Mr. Lewis, Mr. Stuart, and Dr. Campbell, all bring the gravest charges against Lord Dunmore's honesty, without educing a single *fact* to support them. The facts, and actions of Lord Dunmore are laid down in the text. That some of his actions during this campaign are not explained is true; but inexplicable acts never constitute historical facts. For reasons sufficient to himself, Lord Dunmore might have deemed a course of peace the best, and gone across the Ohio without giving a reason: being supreme in command, it was the place of General Lewis and his army to obey orders, and not make charges, on unexplained acts of his.

the hearts of the other. There was no wavering, no falling back, no retreating, neither giving nor taking; but a deadly affray in which the contending parties fought often hand-to-hand. Bullets whizzed, and balls did their awful work; and when their blood waxed warm they met with the sword and tomahawk, carrying on hour after hour their destruction of human life, from which the blood flowed swiftly and freely. During the fight in the early part of the day each army attempted to flank the other, but neither succeeded. In the afternoon, General Lewis, fearing night might come over his band still engaged in the struggle, attempted a flank movement. Sending a portion of his force around, he ordered an attack upon the rear of the Indian army, which was cautiously, but expeditiously executed; the Indians believing a re-inforcement had attacked them in the rear, became demoralized, and fled from the field, as brave a lot of men as ever fought and lost, leaving General Lewis undisputed master of the field, with the laurel of victory upon his brow. (18)

But the laurel was not without its thorns. Many of the most prominent men, as well as officers, were cut down by the Indians. Among those killed were Colonels Charles Lewis, and John Field, Captains John Murray, R. McClannahan, Samuel Wilson, James Ward, Lieutenant Hugh Allen, Ensigns Cantiff, and Bracken, and forty-four privates. Total killed, fifty-three. The total number of wounded was eighty-seven; killed and wounded, one hundred and forty. The destruction to life was

(18) General Andrew Lewis, the hero of Point Pleasant, whose acts and deeds of valor in defense of the early settlers endeared him to the hearts of all, is entitled to more than passing notice. He was born in Ulster, Ireland, being the son of the pioneer John Lewis, who was the first settler in Augusta. He was a man of sterling worth, decisive character, and full of loyalty. When quite young he entered the colonial army, and was rapidly promoted. He was an officer under Washington at Fort Mifflin; was in the Braddock campaign, and wounded at the battle of Monongahela. In 1756 he commanded the "Big Sandy Expedition," and was with General Forbes at the reduction of Fort Du Quesne. He was one of the commissioners to treat with the Six Nations at Fort Stanwigs, rising to the rank of brigadier-general in 1774. In 1776 he entered the Revolutionary War, and was in that until driven home by fever. He expired at Colonel Buford's residence, east of the Blue Ridge Mountains, in Bedford County, Virginia. He was interred on his estate known as "Dropmore," near Salem, Virginia. No stone marks his resting place, nor tells where lies the hero of Point Pleasant, and it is a stigma upon his State that one who fought and bled for his country should be without some record as to his last resting place. His descendants now residing throughout Virginia are representative people, and many have occupied prominent positions in civil matters.

simply fearful, and the conflict raged from sun-rise to sun-set. Some of the foremost men of the country lost their lives, and left large families to mourn their untimely departure. Nor was the loss on the Indian side less. While none of their leaders were killed, many of their braves perished, and a lesson was taught them they never forgot—that the whites were their masters. The conducting of the battle by both Logan, and Cornstalk, exhibited rare courage, and skill in commanding, as well as urging their men. Cornstalk could be heard above the din and roar of the fight, exhorting his soldiers to deeds of valor, and both he and Logan commanded the respect and admiration of their opponents. (19) The former was murdered some three years afterwards in the fort at Point Pleasant, in a brutal manner. Logan became a confirmed sot, and on his return from Detroit was killed by his brother-in-law. (20)

(19) Cornstalk was a person of unusually good sense, besides having undaunted courage. At a meeting held of the chiefs on the evening before the battle, he advocated peace, and wanted to treat with General Lewis. But he was bitterly opposed, and is reported as having said:

“Then, if you will fight, you shall fight, and I will see that you do fight.”

He kept his word, for during the battle he brained one of his own men for cowardice, and exposed himself in the thickest of the fight encouraging, and forcing his men to do their duty. The death of this brave warrior casts a canopy of shame over the garrison established at Point Pleasant some years after the memorable battle there. In 1777, when the Revolutionary War was raging, the Indians desired Cornstalk to make peace with their enemies. He came to Point Pleasant with Red Hawk, another chief. Owing to certain utterances of his, Captain Arbuckle thought proper to detain him in custody, and one day while there, his son Elinipsicc visited him. During this visit a white settler named Gilmore was killed by an Indian, and when his body was brought to the fort, his comrades sought revenge on the brave old chief and his son. Cornstalk was exhorting Elinipsicc to meet death bravely, when he was shot, being literally torn to pieces by the number of bullets piercing his body; Red Hawk attempted to save himself by going up the chimney, but was killed in the attempt. Thus passed away three brave men, bent on errands of peace. It is a blot upon the Fort that will never pass away.

(20) Thomas Jefferson is reported as having made this remark of Logan:

“That he thought him the equal of any of the ancient Roman or Greek orators.”

The character of Logan, as well as that of Cornstalk, stood out prominently under all circumstances. Logan's oratorical powers have been rendered immortal by his celebrated speech made to Colonel Gibson, who was sent to his cabin to bring him out at the treaty of peace held by Lord Dunmore in Ohio, just after Lewis' victory, from which the chief was notably absent. When requested by Colonel Gibson to come to the meeting he sent this speech to Lord Dunmore:

“I am a warrior, not a counellor, and I will not go. I appeal to any white man to say if he ever entered Logan's cabin hungry and he gave him not meat;

The result of the battle of Point Pleasant, and treaty of peace made by Lord Dunmore, together with the forts established along the frontier, caused nearly a complete cessation of hostilities, as well as the retreat westward of the Indians. Emigration now poured in the country over the Alleghanies, and the settlers turned their attention from the horror of war to the scenes of peace, and began bettering their condition. Their arms were turned into plough-shares, for not even were the surveyors out in dear old Kentucky in any way molested by the Indians. Lands were being taken, meted off, and cleared; settlements as permanent homes made, and when the last cloud of the Revolutionary War had been dispelled, a brighter horizon than ever of peace and plenty beamed over the land so dearly fought for and won as an everlasting heritage. And a goodly heritage it was.

if ever he came cold and naked, and he clothed him not. During the course of the last long and bloody war, Logan remained idle in his cabin an advocate of peace. Such was my love for the whites that my countrymen pointed as they passed, and said: 'Logan is the friend of the white man.' I had even thought to live with you but for the injuries of our men. Colonel Cresap, the last spring, in cold blood and unprovoked, murdered all the relations of Logan, not even sparing my woman and children. There runs not a drop of my blood in the veins of any living creature. This called on me for revenge. I have sought it. I have killed many. I have glutted my vengeance. For my country, I rejoice at the terms of peace; but do not harbor a thought that mine is the joy of fear. Logan never felt fear. He will not turn on his heel to save his life. Who is there to mourn for Logan? Not one." "Trans-Alleg." Pp. 226.

CHAPTER III.

The Early Pioneer's Settlement.—Mode of Life of the Early Settlers.—Their Way of Living.—Their Laws, Morals, Manners, Customs, and Amusements.—Rapid Improvement in the Earlier Part of the Nineteenth Century.

After the tocsin of peace had sounded throughout the land west of the Alleghany Mountains, and the savage barbarian who had fought so bravely, was driven farther along the western wilds, the early settlers turned their attention, not to a life of ease and pleasure, but another field to conquer—the wilderness won by them. No one, except those intimately acquainted with the state of the country about 1780, can imagine what a dreary never ending wilderness the whole seemed. On every side primeval forests and thick undergrowth occupied the valleys, while gnarled oaks, crooked pines, and rugged rocks, lined the beautiful mountains. The penetration of this trackless region on the very start, gave one the idea of being lost, for it appeared never-ending, without an outlet, except a farther visit into its fathomless depths. The beauty of the scene was of the supernatural kind, that awed the soul of the beholder, leaving him in sole communion with his God and himself. The green leaves of the oak and hickory, contrasting strongly with the crimson of the alder-bush and the pink of the haw-haw, while presenting a picture of rare scenic beauty, was over-spread with a bewildered appearance as to where it all led. (1) Into a wilderness of this kind did the early pioneers fight their way to make a permanent home.

(1) If in this enlightened day, one should attempt to cross the Alleghany through a portion of its unexplored and uncultivated part, it would seem like a never-ending wilderness, fit only for the home of the wolf, the panther and the deer. A lonely, homeless, longing sensation for a human face, or habitation, is the prominent feeling, and a trip of this nature for a few days only gives an idea what our fathers suffered, to say nothing of the danger from Indians and wild beasts as well. Tradition, as well as our scanty records, tell of the many dangers from some of the wild beasts of the forest. In the early days, bears, wolves, as well as panthers, inhabited this region, often attacking a settler. The rattlesnake, too, caused many a death, and was an inhabitant of this section, having his home first in the valleys, then upon the hill as man settled the former.

The first act of the pioneer was to construct a shelter. This was at first of the rudest description. A spot was selected and cleared off, and a few logs, notched at the end, were placed one upon the other in a square; when these were ten or twelve feet high, a layer of poles was spread over the top, and dirt thrown upon them. In this rude structure the little provisions and few tools of the pioneer were placed, and he resided here until he had time and means to erect a more commodious residence. Soon he cleared a larger space, enough for a small yard with the house, and larger logs were felled and hewn with which to construct the body of the house. By means of riving straight pieces of pine timber, boards (called clap-boards) were made, which served for the covering, flooring, as well as doors and other parts. Wooden pins, of the necessary dimensions, were used instead of nails; and the scanty furniture filling the house was constructed in the same way. Beds, tables, chairs, cupboards, bowls and platters, were made in this simple fashion. It is not hard to imagine, that when a house had to be furnished in this mode, no more was constructed than actual necessity required. (2)

After the shelter from wind and storm was secured, the next step was to make sufficient clearing for a patch of corn. This cereal was the bone and sinew of the pioneer. In the first place, Indian corn was the staple with the aborigines in this section, and very nutritious. It possesses, probably, more oil than any other grain, and is much more easily cultivated and garnered. It is a food that will support both man and beast alone, and can be eaten in its crude state by every class of granivorous animal. During the clearing, planting, cultivating and gathering of this first crop planted, the pioneer, if far from home or other settlements, supported himself by hunting, fishing and trapping. Rabbits, ground-hogs, pheasants, deer, and bear meat, all contributed to his support, while the skins were used in a great measure for clothing. After gathering his first crop, the early settler brought in his family, pigs and chickens from the last frontier line, if he had them; and, if not, he accumulated

(2) Some of the articles made from wood by the early pioneers and their families were really ingenious. They carved bowls and plates out of the knots of timber taken from the forest. An early settler on New River had a set made from gnarled walnut that was very pretty; and the family who possessed a table set made from cedar, was considered fortunate indeed. These were only used when company came.

all as rapidly as time would permit. The introduction of the feminine gender into his house always meant improvement in every way. After her advent, the spinning-wheel, flax-wheel and loom, were introduced, and the next year a larger patch was cleared in order to grow cotton, flax and vegetables. In those days everything worn was made at home, from a coat and dress of jeans and linsey, to a pair of socks knit of cotton and wool. Clothes were worn then on a much more economical scale than now, two pairs of socks being considered ample for a man. (3)

In many places far from home, grain was crushed between rocks, and wheat, if raised, was severed from the chaff by means of flails. Owing to this fact but little wheat was cultivated until threshing machines began to be introduced. Some little buckwheat flour was raised, and occasionally rye. They cured their own meat, consisting of pork, as well as venison, and bear meat dried, or jerked, after being sliced up. Generally, during the summer and spring the settlers would clear and cultivate their patches of ground, in order to have a sufficiency of bread during the following winter, and when the fall ushered in its clear, frosty weather, hunting, the business of the winter, began. Every morning the men of the household sallied forth with their flintlock rifles, their powderhorn and shot-pouch, and tow, used for wadding. They killed every kind of game that presented itself, discarding what was unpalatable, and conveyed home what could be used for food. The skins were always preserved for shoes, clothing, cords and thongs. (4) All the

(3) The industry of those early ladies was something marvellous. From a Miss Wright, a lineal descendant of Peter Wright, who resided in the Alleghany Mountains, we have the following recital handed down in her family by tradition:

"There lived in our neighborhood a family by the name of Tueker. The grandmother of the present generation of men, was a woman of great industry and activity. Once a week she walked ten miles to the mill to have her grain ground. She would place the turn upon her head, walk going and coming, and knit a pair of socks on the way. She carried her ball of yarn in her pocket. Her grandson, in relating her many deeds of prowess, always wound up by saying: 'But though my grandmother could knit her pair of socks going and coming from the mill, and tote her turn at the same time.' This old lady was called Peggy Tueker."

(4) When General Andrew Lewis was on his expedition, in 1756, known as the "Big Sandy," on his route to Ohio, a buffalo was killed on a stream in West Virginia. His skin was cut into tugs, and hung up to dry. On their return months afterwards the famished soldiers ate those pieces, and called the stream "Tug." To this day it is known as "Tug Fork" of Big Sandy River. "Dr. Campbell's Sketch."

meat not used for present needs was dried, cured and hung away for future use, or some of it presented to a less fortunate neighbor, if he lived near enough to reach his home. By this means their table was supplied, though scantily, and often a pioneer would have to go out before eating anything early in the morning in order to secure his breakfast. The mode of locomotion of the early settlers was primitive to the last extent. Personally, they almost invariably walked—some more fortunate ones rode. All their lumber and building material was dragged along land, or floated down streams. Perishable material was conveyed either on the back, or if too burdensome for that, placed upon rudely constructed sledges, that were hauled by horses or oxen. When one was so fortunate as to possess a horse, his wife frequently rode behind him to preaching, to make a call, or go elsewhere; and even now in the extreme mountainous region this custom prevails to a large extent. The young people always walked; generally together, and a ten or fifteen mile tramp was not regarded as anything extraordinary. Roads were nearly unknown at first, but trails were used instead, many of these having been made by the Indians in crossing and recrossing mountains. They generally followed streams, except when the latter made a large bend, then the trail cut across. As the country became more thickly settled, the settlers opened up avenues of communication, (5) But few of these existed, however, until the country was cut up into counties, and communication became a common occurrence between the more populous settlements.

As courts were not in existence among the old pioneers, nor magistrates generally near them, they were more or less a law unto themselves. If a man committed murder, they quietly had him sent to the nearest court-house within that jurisdiction, and turned over to the proper authorities, If he simply killed a fellow-being in a square fight, nothing was thought of it, and no steps taken except to bury the dead man. Any one caught

(5) Many of these trails existed between various places, but there seems to have been a principal one leading from west to east, over which the Indians came. At various points the trees were marked so as to indicate the route, as well as distance to various points, and were of assistance to pioneers in locating themselves. One of the largest of these was the one made by the buffalo through the cane-brake from the mouth of Limestone Creek in Kentucky to the interior. The present Maysville and Lexington turnpike runs along the old buffalo trail.

stealing in a large quantity, was made to leave the settlement at once, and if guilty of petty theft, was whipped. (6) If a man wantonly destroyed his neighbor's property he was made to return it either in kind or labor. Offences of a carnal nature were severely dealt with: if a young girl was seduced, her nearest male relative killed the seducer, and criminal intercourse was promptly frowned down, by the guilty parties being excluded from the society of the entire settlement, until they either amended their lives or married. If a person contracted debts, and failed to pay them in kind or labor, he was not trusted by any one in the settlement, and his promise was regarded as null and void. And if a settler showed a disposition not to rectify his breach of these unwritten laws, he was notified to leave the settlement at once. He rarely left after a second notice, unless carried away bodily. The result of these laws was a strong, healthy morality, that permeated almost every early settlement. Whenever practicable, religious services took place in some house at which the whole community would assemble, and often prayer-meetings were held. Swearing (except at an Indian) was not encouraged, and Sabbath-breaking not tolerated; on the records of some of the earlier courts of these settlers are found indictments for both Sabbath-breaking and profanity, showing that their code of morality was by no means a low one.

While the hardships and toils endured by the early settlers prevented their manners being either elegant, highly refined, or cultured, they were genial, kind and hospitable. Scarcely any one was guilty of injuring his neighbor, wounding his feelings, or being absolutely rude. Each person did all in his power for the pleasure and comfort of his brother-pioneer, and the door of his cabin was ever open to friend, and stranger alike, and the best in his house provided for both unstintingly. They were always ready to assist and aid a new settler, giving him of their stores, advice and knowledge, as he might see fit to ask, or demand. Necessarily both their laws and manners made their customs peculiar, compared to ours of the present day. Banded together by the same ties; bent on the same pursuit to reach a given end; isolated, and cut off from all law, order, refinement and culture, they forged a set of customs that have been handed

(6) From this custom of whipping for petty larceny by the early settlers, was inaugurated the statue of Virginia, introducing the whipping-post, which was afterwards abolished.

down like law. Their first and great custom was that every one should join together to defend their settlements and homes from the Indians, when any one was attacked—one which was religiously obeyed. The first news that an attack had been made by the redskins, brought out every male settler in the community; and, in the mountains to-day, if any citizen is molested the rest fly to his assistance at once. When any one desired to build his house, or clear a patch of ground, the custom was to summon his neighbors, and all joined in the work until finished.

(7) Owing to the peculiarity of their situation, the individuals were drawn into closer bonds of union than those we have in the present day, and were much more alive to each other's wants. The ladies attended strictly to their household duties, and at meals waited upon the table, therefore, they rarely ate while the gentlemen did so. At services, too, at any place of public worship, they generally occupied one side of the church, while the men took the other.

Weddings were ordinarily turned into feasts of the liveliest description, at which the guests and friends of the household assembled to witness the ceremony, and afterwards have music and dancing. (8) The bridal presents consisted of a bed, a chair, a skillet, or some other useful household article, that would enable the young people to begin housekeeping. As all the manners and customs of these people were simple, so were their

(7) The assembling to build the body of a house of logs was generally called a house-raising. When a settler desired to construct a building, he notified his neighbors, who assembled at an appointed time, and in a short while the hewn logs were in place, and the building ready for its roof. When a clearing was to be made it was termed a "chopping." The assembly cut, rolled, and moved the timber and brushwood, leaving the ground ready for cultivation. The owner of the place usually gave a feast at the end of the work.

(8) "The marriages among the old settlers differed very materially from those of the present day. Like a death, it was not an every-day occurrence; and while celebrated in a different manner, was equally an important event. On the day on which the ceremony took place, the bride was never seen by any one except the bridesmaids, who assisted in robing her for the occasion. The groom was accompanied by a brother, or his nearest male relative, and kept as much as possible from the crowd until the ceremony. After that, the bride and groom were seated in two chairs by each other's side, to be gazed at and talked to, until the dancing began. When the bride retired, she was accompanied to her room by two of her maids of honor, who assisted in disrobing her for retirement. After which, they descended, and notified the groom. He was then conducted up by two of his groomsmen, who disrobed him and put him to bed." This custom must have been just the least bit trying to a newly-made, blushing bride. Looney M. S.

amusements. Among the men these consisted of hunting, trapping and fishing, principally. Occasionally they indulged in light games, such as quoits, cards and marbles. Betting on any game was religiously excluded,—so gambling was unknown. Parties, house-raising, choppings, quiltings, butter boilings, were all made to furnish their quota of amusement for both male and female, the old and the young. Dancings were frequent, and picnics in the summer, connected with a fishing bout, were not unknown. In everything the pioneer settlers banded together; they fasted, feasted, fought the Indians, danced, prayed, and cursed with one common mind, and were as true, loyal and rugged a set as ever existed.

But through the fertility of the soil they had won, and their frugal industry, these people soon improved their condition in every way. The law of supply and demand found its way beyond the rugged mountains, and the means of bringing away the surplus made by the pioneer settlers and their descendants were used by capital and traders. When the 19th century was ushered in, and their supply of grain exceeded their wants, and furs were abundant, trading establishments were located; and as their means increased, so did their wants. The traders took out such articles as they thought would please them, taking their supplies in return, until money as a commodity of exchange began to flow freely to supply the channels of trade. At last, as their tastes advanced, they erected better houses, and improved their farms more to increase the supply that was in demand. The gentlemen wanted better material for their houses and farms; the ladies finer wearing apparel. (9) In order to facilitate a better communication, highways were constructed be-

(9) A leading gentleman of this section gives a very forceful recital illustrating how careful the ladies of those early days were with their footgear, they purchased. He gets the story from a letter written early in the 19th century by his grandmother then living on the frontier, and the facts he detailed are true. He said:

“When the first trader came to the section where Chamblissburg, in Bedford County, now stands, he brought some very pretty ladies’ shoes, two pairs of which were purchased for some ladies by their father. The girls were accustomed to fur shoes, and going barefooted in the summer. Some time after they got their shoes religious services took place about four miles from their home. On the morning in question they set out with their shoes in their hand, and walked until they reached a branch about a quarter of a mile from the church. There they bathed their feet, and putting on their shoes and stockings proceeded to church. On their return, when just out of sight, they took them off, and walked barefooted back home. They did not believe two such fine pairs of shoes would ever be made again. One of those ladies is the ancestress of three of the leading men of our country.”

tween the east and the west, traversing the mountains, and gradually they improved until the whole region became by the middle of the century greatly improved, and in many places wealth was accumulated, and followed by refinement and culture. Comfortable houses were erected; education encouraged, and at last capital sought the northern portion, causing a development the early settlers scarcely dreamed about. A careful glance at this region as it stands to-day, with some account of the means used in bringing its hidden treasures to light, is by no means uninteresting.



CHAPTER IV.

Counties Composing this Region.—Boundaries of Same.—Area of Square Miles.—Topography of the Country.—Scenery.—Climate.—Soil.

The region of Central West Virginia won by the early Trans-Alleghany-pioneers through the hardships we have detailed, is quite extensive in territory. The trackless forest through which the wily Indian trailed, and the hardy settler trod had been fought for, until the pathway was stained with the blood shed by the Indian, and strewn with the scalps taken from the Caucasian. Through toil, hardship, and suffering, these brave settlers gradually improved this region, which at present is composed of the following counties: Barbour, Braxton, Calhoun, Clay, Doddridge, Grant, Gilmer, Harrison, Jackson, Lewis, Marion, Mason, Mineral, Nicholas, Pocahontas, Randolph, Ritchie, Roane, Taylor, Tucker, Upshur, Webster, Wirt, and Wood. By the treaty with France in 1763, all this section was comprised within the limits of the county of Augusta, and subsequently, as the population increased, and law and order was necessary, new counties began to be cut off from the parent county, until the section we now write of has twenty-four. These were formed gradually, as the needs of the people required. Harrison was cut off in the year 1784, having been taken from Monongalia. In 1787, the County of Randolph was carved from Harrison. Wood County was meted off in 1799 from Harrison. During 1804, Mason County was established, having stood previously as a part of Kanawha. The now populous County of Lewis was cut off from Harrison in 1816, while Nicholas was taken in 1818, from Kanawha, Greenbrier, and Randolph. Bath County of Virginia, and Pendleton, and Randolph Counties of West Virginia, furnished the territory for the formation of Pocahontas in 1821. And from these counties at later dates, within the memory of the ordinary historian, were taken, Braxton, Calhoun, Clay, Doddridge, Grant, Gilmer, Jackson, Marion, Mineral, Ritchie, Roane, Taylor, Tucker, Upshur, Webster, Wirt and Wood. These were not made counties in the alphabetical order in which we have named them, but cut off as the country became opened up, and settled.

This central part of West Virginia is bounded on the north by the Counties of Pleasants, Tyler, Wetzel, Monongalia, Preston, and Grant; west by the Ohio River; south by the Counties of Cabell, Putnam, Kanawha, Fayette, and Greenbrier; on the east by the Alleghany Range of Mountains, properly speaking. It possesses an area of 10,317 square miles, extending from the mountains to the Ohio River. The diversity of formations throughout this region is so comprehensive that we have every age, except the azoic period from which to draw. Within the eastern boundaries we can look over the immense Appalachian range, with its wonderful upheavals and disturbances, while on the west, we can turn our vision over the broad lowlands of the Ohio River.

From the extent of territory embraced within the boundaries named, the topography of the section is a varied one, as can be readily seen. Mountains, valleys, ridges, faults, planes and bottoms succeed each other, from the lofty ranges of the Alleghany, to the lowlands of the Ohio; and in such a condition of surface are all the facilities for every class of agriculture, and every degree of manufacture. All of those counties bordering the western base of the Alleghany Mountains, are situated in the lovely valleys lying between the spurs of the range, as it slopes westward to the planes of the Ohio. The spurs are filled, more or less, with minerals, while the vales are rich and productive. The region is admirably watered by the Cheat River, and its tributaries, that run through Randolph and Tucker Counties; the Greenbrier, running through Pocahontas; the Gauley and its branches, running through Webster and Nicholas; the Elk and its streams, running through Braxton and Clay Counties; the West Fork, running through Lewis and Harrison; the Monongahela, flowing through Harrison and Marion; the Tygart's Valley, running through Barbour, Taylor and Marion; and the Little Kanawha, flowing through Gilmer, Calhoun, Wirt and Wood Counties. These streams, in addition to other smaller ones, not only afford ample facilities for draining the soil, and a wholesome supply of pure water, but are of the greatest utility for agricultural purposes, as well as manufacturing interests. There are some very interesting formations connected with the western spurs of the Alleghany range. In many places, owing to the upheaval when the Appalachian chain was formed, almost every structure of the geological column is represented, with its accompanying minerals,



Salt Lick Falls.

except the primary rocks of the archaen period. In some of this section valleys are delightfully situated on the tops of mountains, in the shape of an oval bowl. Such is the topography of the country immediately surrounding Camden-on-Gauley. The ascent and descent of these unusual formations are of such an easy nature, that railroads are readily constructed to their midst. All the valleys along the banks of the streams not only lend variety to the hills, but are very productive for agricultural purposes, as well as stock-grazing. The hill-sides have, in many places, a splendid southern exposure, where blue grass grows indigenously. The altitudes vary from a few hundred to three thousand two hundred feet above the sea level, giving, as can be easily imagined, some change in the climate. As the heights of the mountains are descended, the valleys along the different streams broaden out as we proceed westward, while the spurs decrease to hills until the broad plane is reached, where the gentle waters of the beautiful Ohio flow peacefully onward from the hills of West Virginia to the extended prairies of the West. The scenery of such a country is necessarily the most beautiful and picturesque on earth. A great part of this region is still wild, with its wealth of scenery, timber, and mineral resources. Only a few years ago everything in this section was wild and silent. The beautiful scenic views were enjoyed by the beasts of the forest, the birds of the air, and nature alone. The swaying branches of the primeval oaks, and hickories were undisturbed save by the whistling of the winds, the rushing of the waters, and the roar of the storms. The wolf, the bear, the deer, and the panther, marched through the distant ravines and gorges, monarchs of all this lovely scenery, watching the laurel, the sumac and the linden, as they gave their glistening colors to the sun. Gauley River leaped along its rugged way, overshadowed by the beautiful foliage, and undisturbed, except by the fantastic shades and shadows dancing on its waters in the glittering sunlight, as they sounded down ravines and gorges, to join those of the turgid New below. The eagle and the hawk, in sombre solitude, perched upon the cragged peaks overhanging the West Fork, and the precipitous cliffs of the Little Kanawha, listened to the chirp of the sparrow, the note of the thrush, and the whirr of the pheasant. The sportive grey squirrel bounded from bough to bough, stopping ever and anon to admire his shadow made by his gambols amid the honeysuckle and laurel. The silent trails of

the decoying Indian, and listening pioneer, had grown cold under this lovely scenery, as the one receded westward, while the other returned home. From where the Elk flows in a narrow ravine, to where it broadens into a plane, the beautiful views were undisturbed, save for the howl of the wolf, the bound of the deer, and the cry of the panther.

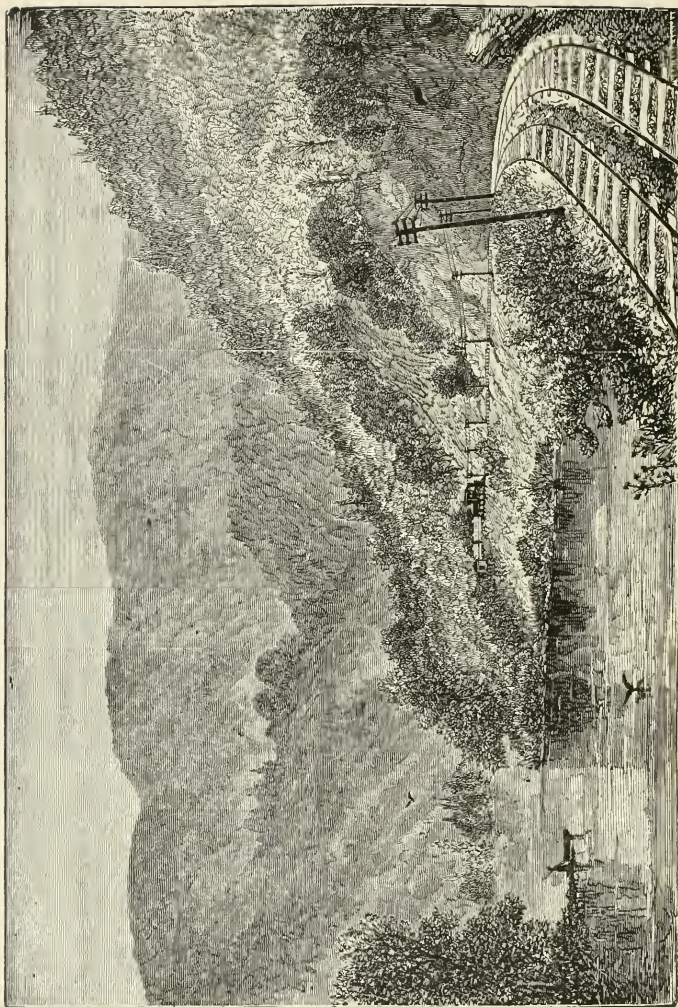
Through these high, snow-capped hills the numerous streams cut their way flowing over billows of stone, and by sharp, jagged end of rocks, until they pass gorge after gorge, ravine after ravine, to empty their waters into those of the Kanawha, and Ohio. In passing along the railroads the variety is startling! One moment we whirl across a little valley, looking north and south, and pass a roaring stream dashing downwards—the next we are in darkness—a tunnel! Suddenly the light gleams upon a precipitous gorge, or steep ravine, running up one side hundreds of feet, while on the other dances the merry waters of some cascade tumbling down the mountain. At one place a stream broadens almost into a lake—at another it narrows into a creek. Boulders of rock jut out as if hanging by a thread; huge ravines sink back as if hammered in. Wild and weird grows the picture, until the whole culminates in some sublime scene, that causes our earthly sense of sight to pause, and ask if it is not gazing on the supernatural.

It matters not to what point of the compass we direct our footsteps in this region, the scenery is not only beautiful, but varied. If we rush along the West Virginia and Pittsburg Railroad, from Weston to Pickens, the view is one of rare beauty. The broad plains around Buckhannon, in Upshur County, sweep away to the blue mountains north and south, while, eastward on the West Virginia Central R. R. we whirl into a trackless forest. The high cliffs on one side, with the river cutting its way through ravines of stone on the other, make us feel as if the train we were on was civilization carving its way for the first time into a wilderness. The sombre shadows of the dense forest give a weird shading to the whole, unbroken save by the brighter colors of the honeysuckle and violets, peeping 'mid the leaves, as if struggling to catch the rays of sunlight dancing through the dense foliage above. From Weston to Sutton, and then on to Camden-on-Gauley, we have a different, but not less lovely, scene. Winding around West Fork, in a tortuous way, we pass the lovely forests and rolling hills of Lewis County, until wilder Braxton is reached. At Flatwoods the

view grows grander as we approach the Elk, along the beautiful waters of which we go for miles, winding up Laurel, until the plateau on Gauley is seen, studded with hills and vales, amid which nestles the young town of Camden-on-Gauley. And it is here that the view culminates in grandeur. The deep gorges and ravines along the Elk River are succeeded by the rugged, precipitous cliffs of the Gauley, that hang like huge boulders of earth and stone over the river banks, as they wind westward.

From this region of wilder beauty, in a few hours, the West Virginia and Pittsburg Railroad will transport us to Clarksburg, where we catch the historic Baltimore and Ohio for the Ohio River. Through Harrison, Doddridge, Ritchie and Wood, a less weird, but grander scene strikes our vision. The rolling hills gradually increase until they become mountains—wild, and rugged, as we whirl through tunnel after tunnel, speeding on towards Parkersburg. Descending, valleys come in view interspersed with spurs of the Alleghany that give the whole a never-tiring variety. This scenery, as well as the rest along the Baltimore and Ohio between Parkersburg and Harper's Ferry, contains a wealth of views that are familiar to the households of all people North and South, who appreciate loveliness in nature.

The scene down the West Virginia side of the Ohio River, along the Ohio River Railroad, while neither so wild nor weird as the mountains proper, is grander, and more subdued. The broad expanse of view given after being hemmed in by the mountains is a relief, and the placid Ohio looks so soothing and peaceful after the rushing of the mountain streams. The low hills of Wood, Jackson and Mason greet the eye as the valley stretches away until the hills of the Ohio side are seen. For over a hundred miles in West Virginia, this valley extends north and south, as far as the eye can reach, dotted here and there with cities and towns, while in the interior, succulent farms may be seen. The valley grows narrower after Ravenswood is passed, continuing so by Hartford, Mason City, Clifton and Point Pleasant, when it broadens again from the mouth of Big Kanawha to the bustling city of Huntington. No lovelier view than this can be found anywhere, and from this valley, eastward to the Alleghany proper, West Virginia has every variety of scenery from the western lowlands to the rugged mountains.



Mountain Scene.

As some erroneous views are held by non-residents concerning the climate of this section we desire to disabuse those by a statement of facts. It is known that this section lies in the middle latitudes, so it is necessarily free from the extremes of heat and cold. The climate, while varying somewhat in different localities, is a good one, particularly in the valleys and mountainous region of the section. The territory is free from the cold of the Northern States and heat of the South. The Appalachian range passing through this section shelters it from the western tornadoes, which leave such disaster in their train. These destructive elements that have brought so much trouble to people in the extreme West, beat in vain against these rock-ribbed barriers that tower up as protecting walls for the inhabitants between. The climate is moreover an equable one in which to reside. (1) It is a delightful summer climate, closely resembling that of the springs region of the two Virginias, and compares favorably with that of Milan, Turin and Vienna, in Europe. During the summer, even in July, August and September, the nights are cool enough for covering, and in the mountains a fan can always be excluded in the shade. Mountain showers are frequent, refreshing everything, yet the water is quickly carried off by the naturally fine drainage. (2) The heavy dews play an important part, for with the showers, they insure the farmer against any such catastrophe as drought, and moisture is amply sufficient for the growth of grasses for hay, as well as pasture. While there is some difference in the climate of the counties bordering the mountains, and those on the Ohio River, the latter is very pleasant.

(1) The following temperature is that given by the Weather Bureau at Parkersburg, West Virginia, for this region;

"Mean temperature for each month:

	1889	1890	1891	1892	1893
January.....	36	42	36	27	22
February.....	30	43	40	38	36
March.....	43	37	39	37	42
April.....	53	54	55	51	55
May.....	62	62	59	62	63
June.....	68	74	73	75	72
July.....	74	73	70	74	76
August.....	70	70	71	73	72
September.....	61	65	69	66	67
October.....	50	55	53	53	56
November.....	44	46	42	40	42
December.....	33	47	33	41	—
For the year.....	52	55	53	53	—

W. W. DENT, OBSERVER."

But the sense of comfort and pleasure derived from a climate, such as we have described, are not all of its chief characteristics. It is a remarkably healthy one. Consumptives have as long a lease on life here as elsewhere, and there is a total absence of all malarial troubles. Ague, chills and fever, are unknown, while the air gives a wonderful lever to nature in recovering a patient to health who has once suffered from the blood poisoning, commonly known as malaria. Longevity of life is obtained by the majority of the people in this region, and the territory, as a whole, will compare favorably with any in the world on the subject of climate. Certainly there are two facts connected with it that render it very superior: freedom from the northeast chilling rains and vaporous fogs that have such a depressing effect upon the human race; and the presence of a bracing northwest wind that gives wonderful elasticity to the frames and minds of humanity. The climate of a country has much to do with the disposition of the people who are born and bred in it, and whose parents have been affected by it. (3) This is one of the reasons that people in the middle latitudes are superior in every respect to those existing north and south of the territory. During life the inhabitants are unusually free from any chronic diseases, and are generally hale and hearty, being peculiarly free from all dyspeptic complaints. As a place of residence, for health and comfort, no more superior climate can be found in America, than the region of which we are writing.

The soil of this whole extent of territory is valuable in every sense. We speak, too, advisedly upon the subject, from the fact, owing to West Virginia's being rough in surface, some

(2) The following statistics are carefully compiled, and give the average inches of rain-fall during the seasons of the year, varying but little :

Spring	10.6
Summer.....	11.9
Autumn.....	9.5
Winter.....	9.8
Year.....	41.8

(3) It has been observed by people investigating the subject, that climate plays an important part in the disposition, as well as the habit of those affected by it. In the North, or frigid climate, people are by nature cold, and acquire a cool, calculating way of living that renders them impervious to the genial amenities of life. Selfishness is sure to develop itself to a certain extent. On the other hand people living in the region of the torrid zone, are so much carried away by warmth of temper and impulse of the moment that reason scarcely has a chance to play.

are disposed, on that account, to decry the value of its soil as an agricultural country. But it is our duty, and it should be our policy, to take things as they are, and not as they seem. The valleys and lowlands are admirable for all the purposes of agriculture, while the mountains and hills produce blue grass indigenously, that is so necessary for stock-raising. On the Ohio valley, and in the lowlands generally, the soil is a rich chocolate, sandy loam, of the best producing capacity. These lands, in the winter, are more or less submerged under the overflow of streams, becoming thereby rejuvenated in fertility every two or three years. And these facts apply to all the soil along the larger water courses we have already named. In many sections limestone is found, and the soil here assumes a stiff, clay loam, varying in color from light yellow to dark red and wine color. On the mountain sides, a loose chocolate, gravelly earth is found, peculiarly adapted to the production of vegetables and small fruit. The potatoes and cabbage raised in this section give us a most favorable opinion as to the power of its production. In the limestone regions there is a durable and fertile soil, well adapted to the growth of grain and grass. In Randolph, and Lewis, and Harrison Counties, where the slate belts lie, the mixture of the decomposed aluminous rocks makes a lighter and warmer soil. Going nearer the base of the Alleghany range, we have the sandstone formations, that render the ground colder, requiring more cultivation and fertilizing, in order to render it productive. Nearly the whole section has a fine surface, running in belts with the stratas of the valleys, showing wonderful fertility as a whole, there being but few lean spots in it. The streams are very crooked, making more or less bottom land that is good for producing purposes.

Passing westward we come to Potomac, Cranberry, Cheat, Elk, Gauley, West Fork, Monongahela, and Little Kanawha Rivers. Along all these streams we find as arable a soil for both production and grazing, as can be seen in any country. And up from the streams wherever the growth of the timber is checked or deadened, blue grass comes naturally, which accounts for all the fine stock that is raised in this section. Wherever the soil has been properly tilled, the returns from agricultural products, as well as grasses and grazing, show a handsome profit. So, taking even the mountainous lands, looking as rough as they appear, experience tells that they are capable of high production in every sense, not-

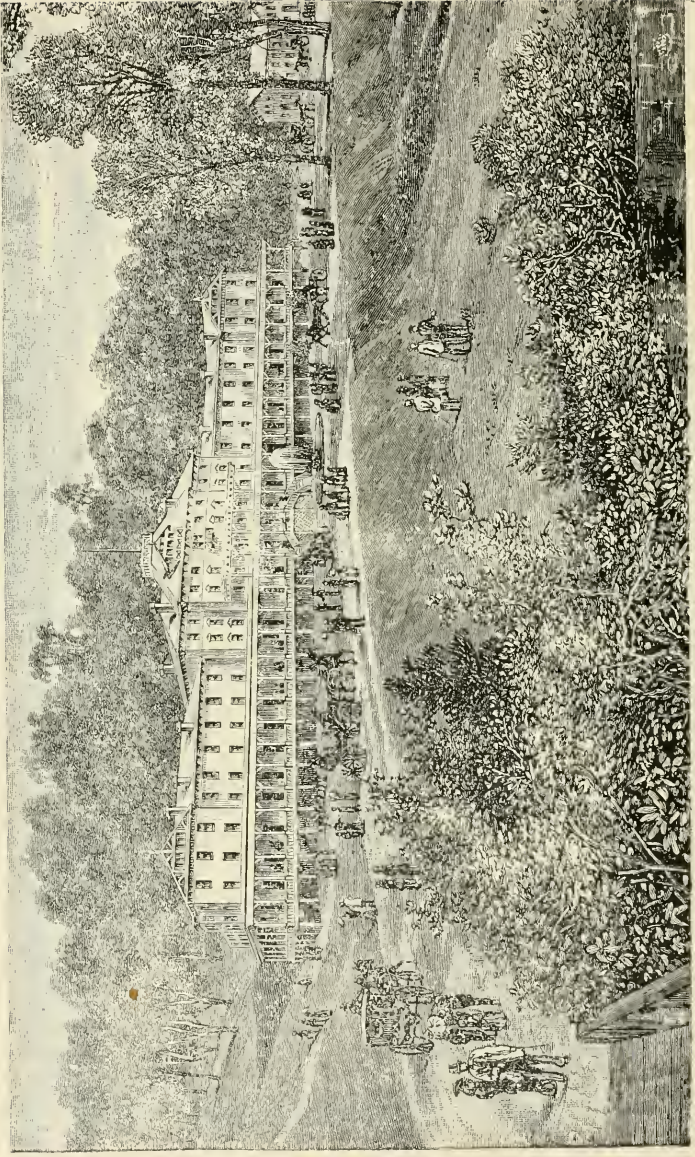


Cheat Mountain Grade.

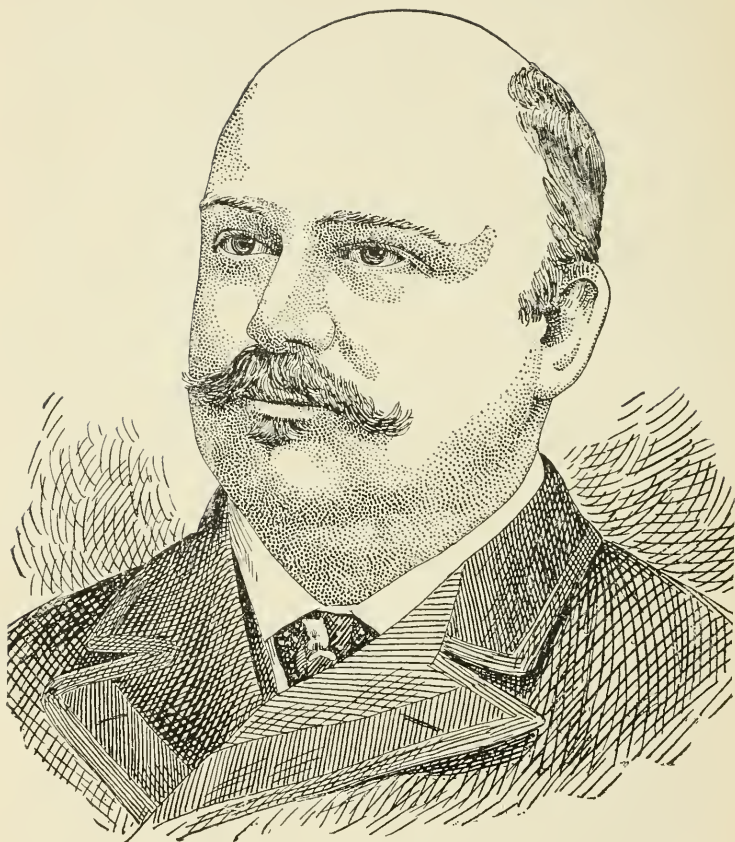
withstanding the fact that West Virginia does not rank high as an agricultural State. This proceeds from the character of the cultivation of the lands, rather than from any want of a productive soil. Thousands upon thousands of acres now lie untilled, capable of a high degree of cultivation, and only waiting

a proper tillage to yield a handsome return in every way agriculturally. Taking the section of West Virginia bordering on the Ohio River, and there is not a finer country in an agricultural way under the sun. This soil produces the very finest yields of cereals, and grasses, as well as every variety of small fruit. It is this productive region that has doubtless assisted in giving the Ohio River R. R. some of its material on which its fine financial standing has gone before the country, which is a credit to the management of that thoroughfare.

While it is not suitable at this stage of our work to go minutely into either the agricultural, or mineral resources of the section, until the means that set their development afoot is related, it is not amiss to give some idea of them in connection with the topography and soil of the country. All of the lands in the Ohio Valley, as well as on the other streams, are suitable for the production of corn, wheat, oats, barley, rye, hay, and the usual vegetables. In the western part of the State, bordering the Ohio section, some tobacco is cultivated. So far as mineral wealth goes the region is unsurpassed. On the western base of the Alleghanies, where the Pottsdam sand stone abounds, there is the celebrated Oriskany system of iron ores, which, while requiring intimate study, and are hard to understand, are the most reliable in the South. In other sections the limonites, argillaceous, and granotites range in working quantities. Unlimited fields of bituminous coals exist, and cannel coal in large quantity has been found. Oil, gas, fire-clays, sandstones, marble, and glass sands are abounding, ready to be taken out. The whole region was stored with agricultural, and mineral wealth that waited for ages for the necessary means to be developed, and their benefit given to mankind. These facilities were at last established, which, with the united efforts of some enterprising people, have placed the whole region on the highway to prosperity. Whatever riches any country may possess, they can never be wholly determined, or understood, without sufficient transportation facilities have been constructed to interest capital in their development. And to obtain a concise, prudent account of the wealth of a country, we cannot adopt a wiser course than to follow the history of these highways from stage to stage, until reaching the present time we see precisely what surrounds us in the land of which we are writing.



Deer Park Hotel, B. & O. R. R.



C. K. LORD,
Third Vice-President, B. & O. R. R.

CHAPTER V.

The Baltimore and Ohio Railroad System.—Its Extent as a National System.—Its Development of this Section.—Bearing on the Region of which we are Writing.—Its Present Policy towards West Virginia.—C. K. Lord, Third Vice President.—Charles O. Scull, General Passenger Agent.—B. and O. Field.—M. V. Richards, Land and Immigration Agent.—His Policy for Developing the Resources.—Something of the Service of the Baltimore and Ohio Line.—The Royal Blue Line.—Pittsburg and Southern Route.

This railway system is at the present time one of the national competing systems of America. The space that is necessary to detail its gradual development; its various ramifications, and extent of territory covered, is wanting. We can only touch sufficiently upon it to show its bearing upon this section of West Virginia as an outlet of transportation, and its policy adopted towards the development of the region.

The Baltimore and Ohio Railroad System may be said to be one of steel bands connecting the great commercial marts of the North and Northeast, with those of the West and Southwest. It is one of the great thoroughfares that brings New York, Philadelphia, Baltimore and Washington into daily communication with Cincinnati, Chicago and St. Louis. And one of the main lines of this system connecting the East and West, traverses for quite an extent this section of West Virginia of which we are writing, giving the country an extensive outlet and markets for trading purposes, both East and West, Northeast and Southwest. The region can export its agricultural products; its minerals, and vast timber resources to all parts of the Union, having in exchange the best commodities of the entire land and country, without being restricted to any particular locality of the compass. This line enters West Virginia on the east, near Harper's Ferry, one of the divisional points of the road, and pursues its route through the Counties of Jefferson, Berkley, Morgan, Hampshire, Mineral, Preston, Taylor, Harrison, Dodd-

ridge, Ritchie and Wood, reaching the Ohio River at Parkersburg, the western boundary of the State. In addition to the direct development of the counties through which it passes, it plays an important part on the whole of the central section, in being the main outlet for the West Virginia Central and Pittsburg, the Greenbrier and Grafton Division of the Baltimore and Ohio, the West Virginia and Pittsburg Railroad, the Monongahela River Railroad, and the narrow gauge line from Pennsboro to Ritchie Court House, and from Tunnelton to Kingwood.

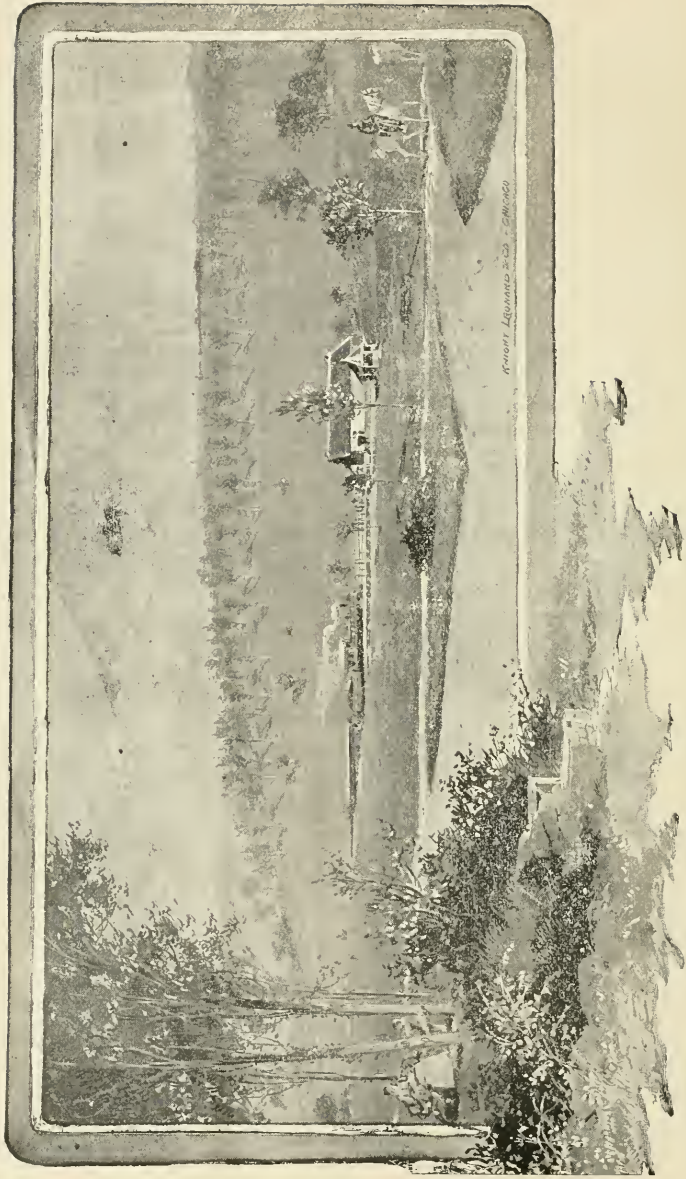
From the time the Baltimore and Ohio Railroad was constructed in this section in 1856, until the present day, the country has progressed rapidly. With the exception of the material improvement of the counties bordering the Ohio River, the remainder of the region before the advent of this line, was a wild,—untutored in material development, and relegated to the most primitive mode of living. Comforts were few; luxuries none, and civilization and refinement, in a progressive way, unknown. The rush of steam engines, however, through the counties we have named brought about a wonderful change. The immense timber resources were utilized; agricultural interests improved; the large coal fields and other mineral deposits were opened up, until the whole section along the line has become a thriving business centre. Harper's Ferry, Martinsburg, Hancock, Paw Paw, Keyser, Piedmont, Terra Alta, Rowlsburg, Tunnelton, Grafton, Clarksburg, (1) West Union, Central, Pennsboro, and Parkersburg, towns in this region, ranging from five hundred to thirteen thousand inhabitants, have been the result, in a great measure, of the development inaugurated by the construction of the Grafton and Parkersburg Line of the Baltimore and Ohio System. All along the road may be seen mines, manufacturing industries and commercial interests flourishing; and so rapid has been the advance

(1) For location, fertility of soil, and rich mineral deposits, the town of Clarksburg is more fortunately situated than any other place along the line of the Baltimore and Ohio Railroad in West Virginia. With every advantage of nature lavished upon it in the most prodigal manner, it should have been a city of fifty thousand inhabitants. It has made but little progress in a quarter of a century, and stands as a monument of how a place, blessed with the gifts of nature, may never progress, when public spiritedness, energy and public patriotism is relegated back behind old fossil ways, ancient ruts, and every per cent. I can get on money loaned. It is to be hoped that the younger set will see the error of the past ways, and throw that spirit, necessary to make it a city, into its future material development.

of this section since the line was built, that through this region the State has its principal reputation abroad. This country is, by far, the most prosperous in the State, and its prosperity may be said to have resulted from the advent of the Baltimore and Ohio Line.

As may well be imagined, the bearing of this great railway system is immense on this country. The outlet it gives for exportation, and inlet for importation, is the life of commercial success in the region. By means of the Metropolitan Branch of the Baltimore and Ohio Railroad, the Philadelphia Division, and traffic arrangements with the Philadelphia and Reading and the Central Railroad of New Jersey, Baltimore, Wilmington, Del., Philadelphia, Trenton, Elizabeth, Jersey City, and New York, are in quick communication with this region. Agricultural products of every class can be sent east to consumers, and comforts and luxuries imported at short notice. The country, in a mercantile, financial, and social way, is in touch with the throbbing pulse of the great metropolis of the east, through the Baltimore and Ohio Railroad as a connecting link. Nor are the western connections less important. The Baltimore and Ohio South-West, running westward from Parkersburg, and branching with its extensions in every direction, plays an important part in the system of which we are writing. Besides the Main Line running to Cincinnati, the Baltimore and Ohio South-West has branches extending from Hamden to Portsmouth, from Belpre to Marietta, and Blanchester to Hillsboro. The Columbus Line is a favorite one, and very popular in every way. The acquisition of the Ohio and Mississippi Railroad by the Baltimore and Ohio, places all the valuable section of the West, between Cincinnati and St. Louis, in immediate communication with West Virginia. The mineral resources of West Virginia, and her vast timber interests, can be exported West to all points, while the vast grain and meat products of the latter can come East. This vast means of transportation has told wonderfully on the development of this section of West Virginia.

But the means of transportation is by no means the only bearing on this region by the Baltimore and Ohio. The actual capital invested by the Railroad Company in the State along its lines has been a large entering wedge in the development of the country. The effect of progress on a State by a railway system may be direct, or indirect. When a



Knight Leonard & Co. Chicago

Scene along the B. & O. R. R.

railroad is constructed through any section, the money expended in the cost of building, and operating the same, with its transportation facilities, bring a certain species of development in its train, that naturally follows. Towns and villages spring up along its line. The employment given produces an influx of population. This may be termed indirect growth brought on by the advent of the line. But the Baltimore and Ohio System has not only been the means of this kind of development, but inaugurated a direct mode of progress in Central West Virginia. The length of its line running east and west through the State attained such an extent that divisional stops for the change of engines and crews became necessary. Shops, round-houses and repairing buildings were erected at Parkersburg, Grafton and Keyser. The result was a large outlay of capital by the company, and employment to thousands of men. Grafton, now a thriving town, as well as Keyser, are purely Baltimore and Ohio creations. The former is not only a divisional point for the New York and Cincinnati route, but the Wheeling Branch as well. Crews upon both lines change here, The result is Grafton has become a flourishing town. So with the city of Parkersburg and town of Keyser. In the ways mentioned, it can be easily seen that the bearing of this system upon West Virginia is very great, with a certainty of increase, as the line extends with its ramifications.

The present policy of this line is for the material growth and progress of Central West Virginia. The Main Line is fed by many branches, and the West Virginia and Pittsburg, and Monongahela, at Clarksburg, and the West Virginia Central and Pittsburg at Piedmont. The result is self-interest, the strongest motive known to humanity, must actuate the Baltimore and Ohio to cultivate the prosperity and traffic drawn through its feeders from Central West Virginia. And it comes within our knowledge that no pains are spared by the line of which we are writing, to bring out and place before the world the resources of this section. The traffic department, under the management of a broad-spirited man, is opening its channels to this region. Mr. C. K. Lord, Third Vice-President of the system, is particularly interested in the resources of Central West Virginia.—knowing their future value to his line in the way of traffic. (2) Every possible encouragement is given to those desiring to locate along the line in the way of freight rates, service and side tracks. The company, in addition to the invest-

ments already named, has purchased large properties in this State, and is now engaged in their development. The passenger department lends its aid, as far as possible, to place the country in an attractive way before the public. This department, under the admirable training of Mr. Charles O. Scull, gives the world much in connection with the scenery of the State, that has attracted wide-spread notice. (3) But, probably, one of the greatest engines inaugurated by the Baltimore and Ohio System, is the "Baltimore and Ohio Field," a journal published in Baltimore, for the benefit of the country tributary to the line of the railroad. This undertaking, under a careful management, has gradually improved, until Mr. M. V. Richards, Land and Immigration Agent, has caused it to gain a national reputation. (4) The knowledge disseminated by this journal is

(2) Mr. C. K. Lord, Third Vice-President of the Baltimore and Ohio System, has not only given West Virginia every possible facility through railway channels for development, but has shown his faith in the central part, by investing in various enterprises. His knowledge concerning railway matters is quite extensive. Born in Hoosac Falls, N. Y., he entered the railway service in 1865; since which he has risen steadily until the year 1888, when he was created Third Vice President of this system. He is one of the directors of the West Virginia and Pittsburg Railroad, and the Monongahela River Railroad. He has taken an active interest in all matters connected with the material development of West Virginia. He regards this State as equal in resources to any other in the Union, as to coal, timber and other products. His is a familiar name in Central West Virginia, being inseparably connected with his system, wherever the development of the region is mentioned. The gratitude due him is cheerfully accorded by the people here, which is doubtless appreciated by him.

(3) Mr. Scull is peculiarly fitted for the position he now fills. Educated in railroad service, he comes from the well disciplined corps of passenger men, that the Pennsylvania System has turned out. He possesses a perceptive power for the needs of passenger service, evolving many original ideas for attracting people along his lines. He lends prompt attention to anything connected with the reputation of the country along his line, giving every available means for the spreading of the same in the most attractive mode. West Virginia has come in for its share.

(4) The policy pursued by this journal has been of infinite service to the country along the line of the Baltimore and Ohio Railroad and its tributaries. Particularly has its pages been devoted to the placing of Central West Virginia's resources on the West Virginia and Pittsburg and Monongahela Railroads. It has culled information from every quarter with reference to the agricultural products, timber wealth, and mineral resources, and given them to the public, north, south, east and west. Mr. M. V. Richards has charge of this important branch of development, for which he possesses peculiar capacity. A wide knowledge of every section of the Union, particularly the West, combined with broad intellectual capacity, gives him full power wherewith to publish to the world the advantages of this rich section in a proper manner.

the concensus of opinion of those who have the means and opportunity of judging.

The wealth, advantages, and resources of this region are constantly kept alive in such a mode as is sure to attract more or less settlers. Too great credit cannot be given this enterprise, nor the good it does be readily computed. From this cursory view of some of the undertakings of the Baltimore and Ohio System, may be gathered its present policy towards Central West Virginia. It is a most progressive one in every sense.

The service of a railway system, especially passenger, has more to do with the progress of a country than would be supposed from a casual view. First impressions with some people have a great deal to do with the make up of conclusions and opinions. Who has not connected miserable railway service more or less with the section we are in when passing through it? Like a bad hotel, it irritates on the start, so we dissuade and discourage friends and others from passing that way. And countries, like gold-mines, can never be developed unless they are seen and known. The service along the Baltimore and Ohio is amply good and sufficient for its traffic, being an attractive one in every way. At Cumberland, Maryland, the Main Line from the East, and Northeast Branches, one going *via* Pittsburg to Chicago, the other *via* Grafton to Wheeling, Bellaire, and other points West, and to Parkersburg, Cincinnati and St. Louis. Over these various lines through express and passenger trains are run on the quickest schedule, with Pullman sleeping and buffet cars, and all the modern appliances, comforts and luxuries. The through New York, Cincinnati and St. Louis Express, running double-daily vestibuled trains, traverse the section of which we are writing, giving it ample passenger facilities, and an opportunity for strangers passing through to see the country and make enquiries concerning it. Local trains, to accommodate passengers in the section, are arranged on a schedule to suit the travelling public, with reference to pursuit of business and comfort of life. By means of these trains a person can reside in Parkersburg, or Clarksburg, or Grafton, with his family and attend to his business elsewhere every day. The service is very complete in every way.

But it would be amiss to close this particular subject without some reference to what is known as "The Royal Blue Line," comprising the Metropolitan Branch, and Philadelphia Division of the Baltimore and Ohio. Whoever goes from this section is



Scene along the B. & O. R. R.

never satisfied in wending his way North, unless he alights from the express train at Washington, and goes over one of the trains of the "Royal Blue Line," that has acquired the reputation of being the most complete line in the United States. A careful comparison of these trains with others over national systems, give the palm of victory to the "Royal Blue Line," when speed, comfort, ease, elegance and cultured taste are all considered. The parlor cars on this line are miniature palaces, fitted up luxuriously. One is transported from Baltimore to New York in an incredibly short time with the most perfect ease and comfort. The ultimate success of the Baltimore and Philadelphia Division justified the wisdom that first thought of running an opposition road to the Pennsylvania lines. This line fought the Baltimore and Ohio undertaking bitterly, and the latter only carried its point by the most lavish expense and dogged determination. But it is now one of the best paying portions of the whole system. No better service is found in America than that afforded by the "Royal Blue," over which every one is desirous of going when travelling North.

This system is destined to play by no means an unimportant part in what will be geographically the through route between Pittsburg and the South. We allude to the link just finished between Morgantown, West Virginia, and Uniontown, Pa. The extension of the West Virginia and Pittsburg, south to some point on the Chesapeake and Ohio, will give a much shorter mode of travel between Uniontown, Connellsville, Bradford, McKeesport, Pittsburg and Alleghany, in Pennsylvania, to the South, than the ones now adopted for use. Time and distance will be saved, and the present routes practically abandoned—those by Washington, D. C., and Charleston, West Virginia. The manufacturing industries North will be more intimately connected with the raw material of the South—that of Central West Virginia in particular. A new country through this region will be opened up, whereby it can pour its tribute of vast quantities of lumber and mineral resources into the laps of the manufacturing industries North.

The Baltimore and Ohio with all its lines, feeders, branches, and links is one of the finest in America. It passes through the best section of country in the land, not least of which is Central West Virginia.

CHAPTER VI.

The Ohio River Railroad.—Its Earlier History.—Bearing on this Section.—Its Present Status, Management and Condition.—Number of Miles Operated, and Financial State of the Company.

The Ohio River Railroad, that runs on the West Virginia side of the Ohio River from Wheeling, in the northern part of the State, to Kenova, that is situated on the borders of Kentucky, has an important bearing on the section of country now under consideration. Its Main Line runs through a large part of the region, while its branches penetrate the interior. It is a south-western and north-west, and east outlet for Central West Virginia, furnishing ample transportation facilities for a region that would be virtually dependent upon primitive modes if the line was not in existence. It is a connecting link between the great Pennsylvania System, running into Wheeling in the northern part of West Virginia, and the Chesapeake and Ohio System running east and west through the southern part of the State. As a local line, it traverses a fertile valley, not only rich in agricultural resources, but a country bristling with oil plants, coal mines, and manufacturing industries.

To the wisdom of Senator Johnson N. Camden is probably due the original idea of constructing this road. Seeing the many advantages to be derived from a route along the Ohio River, he succeeded in obtaining the interest of others in the plan. On April 18, 1881, a charter was obtained under the name the Wheeling, Parkersburg and Charleston Railroad. The rights of way from Wheeling to Parkersburg, were obtained principally by Mr. George W. Thompson, the present President. On December 16th, 1882, the charter was amended, and name changed to the Ohio River Railroad; June 15th, 1884, the road was opened from Wheeling to Parkersburg for traffic, a distance of over one hundred miles. January, 1886, traffic was opened between Point Pleasant and Parkersburg, and April 1st, 1888, saw the entire route in operation between Wheeling and Huntington. The Huntington and Big Sandy Railroad, that was

built to run from Guyandotte to the Big Sandy *via* Huntington, was opened and operated by the Ohio River Railroad in 1893. So it will be seen that the latter has a line from Wheeling to Kenova, a distance of two hundred and twenty-four miles as a Main Stem, besides several branches in operation. This line has two branches that act as feeders from the counties of Roane and Jackson. One runs from Ravenswood on the Main Line to Spencer in Roane County, a distance of some thirty miles. The other branch runs from Ripley Landing on the Ohio River to Jackson C. H., a distance of some fifteen miles or more. It is therefore seen that this system is of very important bearing on a portion of Central West Virginia. It gives the Counties of Wood, Jackson, Mason, Wirt and Roane transportation facilities, to say nothing of the section of West Virginia it penetrates north and south of the region of which we are writing.

Considering the fact that this is virtually a home industry, and under control of home people, the success of the line, as a railroad to convey people and freight, as well as its financial aspect, is something phenomenal. Two reasons may be assigned for this state of affairs. In the first place, the resources along the line are very rich in every way. For two hundred miles it traverses the great valley of the Ohio River, that is rich and succulent in the productions of the soil, and live stock of every description. It runs through the rich oil-belt of West Virginia in the northern part of the State, and taps the great Pittsburg coal seams in upper West Virginia, and Mason County south. The continual supply of resources from these natural means has given the line a wonderful traffic as a local route. Again: the management of the finances of the system from the beginning of the operation of the road has been so ably administered that it has not only escaped the hands of a receiver, but become a paying institution in every sense. (1) The most rigid economy has been practiced, and the operations confined to a basis for revenue alone. The scope of country from which the line has drawn its traffic extends far from the limits of the road. It is the most direct route between Pennsylvania, and the country

(1) The financial policy of this line under the management of Mr. George W. Thompson, its President, is a by-word for economy and revenue. However much he may have been criticised as adopting a policy savoring too much of "false-economy" he has made the line, not only a self-sustaining, but a paying institution. The physical condition is well preserved, and equipment amply sufficient. From extracts taken from the Ninth Annual Report of the Presi-

bordering the C. and O., and N. and W. It connects at Wheeling with the Pennsylvania Railroad and B. and O. At Parkersburg with the B. and O. and B. and O. S. W. It crosses the T. and O. C. at Point Pleasant, and connects at Huntington with all lines running east and west. With these connections it can be readily seen that the line has an important bearing on the country of which we are writing.

The present management, and condition of this system, while not complete, owing to the fact it is not a trunk line, is highly satisfactory. Both freight, and passenger traffic is in such quantity as to render the road able not only to meet all fixed charges, but to have a surplus as well. And the fact that it is a local road does not detract from its carrying a great deal of freight originating over other lines. (2) The interchange of commodities between the sections of country connected by

dent to the stockholders, some idea can be gained of the present condition of the line. For the fiscal year ending December 31st, 1892, the earnings, after paying interest on bonds, and all fixed charges, left a considerable surplus to the credit of the company. During the great financial stringency, when other lines were suffering from a decreased revenue, this road maintained its own, giving a wonderful reputation for financial stability. Comparing its physical condition with that of other lines, it does not suffer by the comparison, but is on a *par* with the average. The following extract from page 9 of the Ninth Annual Report gives an idea of the gross earnings, expenditures, and net profit:

Gross Earnings.....	\$795,135 74	
Less Operating Expenses.....	452,791 03	
Net Earnings.....		\$342,344 71
Deduct—		
Interest on Bonds.....	\$228,705 83	
Taxes.....	25,941 86	
Rent of Benwood Extension.....	7,143 07	
Interest on Car Trust Obligations.....	6,018 40	
Discount and Interest.....	1,697 22	
Adjustment Sundry Accounts.....	211 74	
Total.....		\$269,718 12
Net Income for the Year.....		72,626 59
Balance to Credit of Income Account.....	72,626 59	
Surplus on December 31, 1891.....	161,431 04	
Net Surplus December 31, 1892.....		\$235,057 63

(2) From the same report, on page 22, it can be seen that the number of tons of freight carried is a fine showing for a system of its size:

	"WEIGHT IN TONS.	Tons.
Originating on this road.....		319,019.
Received from connecting lines.....		190,132.
Total.....		509,151.*

This freight consists of minerals, manufactured goods, agricultural products, and live stock, as well as general merchandise.

this line, is one of the prime causes of the receipts from connecting lines. In addition, it carries a large amount of freight from the section of West Virginia already reverted to. The equipment is ample for the traffic, and the service for passengers good. Owing to local travel the stops are frequent, yet a schedule of time is maintained that averages well with any of the other systems in the South. The line has done much for the country it penetrates in the way of development, and been the means of establishing numerous manufacturing industries along its line, and building up many towns. As has been shown, its financial policy speaks well for its management in that sense. (3)

The future of this line is something to be considered if prudence is combined with a liberal, broad-spirited policy in dealing with it. From its connecting links, and geographical position, it must be sooner or later a part of some trunk system. It has been advocated, and we think not improbably so, that this route may at no distant date become a southern outlet for the Pennsylvania System, that only needs a southern terminus to render it capable of running its trains, north, south, east, and west.

(3) A careful glance at the statement given here, of the earnings and expenses of the years 1891-92, gives a good view of its financial condition. From the "Ninth Annual Report" we have the following:

"EARNINGS AND EXPENSES FOR THE YEARS 1892 AND 1891.

EARNINGS.	1892	1891	DIFFERENCES.	
From Passengers.....	\$332,106 92	\$291,685 55	\$40,421 37	Inc.
" Freight.....	407,524 01	355,384 87	52,139 14	Inc.
" Mail.....	23,400 71	22,783 79	616 92	Inc.
" Express.....	7,414 20	6,549 21	864 99	Inc.
" Telegraph.....	4,380 60	3,023 84	1,356 76	Inc.
" Miscellaneous.....	4,361 31	8,081 66	3,720 35	Dec.
" Car Mileage.....	15,947 99	19,457 73	3,507 74	Dec.
Total Earnings.....	\$795,135 74	\$706,966 65	\$88,169 09	Inc.
EXPENSES.				
Maintenance of Way and Structures....	\$117,839 76	\$127,252 47	\$ 9,412 71	Dec.
Maintenance of Equipment.....	85,413 80	67,228 61	18,185 19	Inc.
Conducting Transportation.....	215,314 35	187,776 35	27,538 00	Inc.
General Expenses.....	34,223 12	29,993 34	4,229 78	Inc.
Total Operating Expenses.....	\$452,791 03	\$412,250 77	\$40,540 26	Inc.
Net Earnings.....	\$342,344 71	\$294,715 88	\$47,628 83	Inc.
Taxes.....	25,941 86	25,799 40	\$ 142 46	Inc.
Per cent. of Operating Expenses to Earnings.....	56.95	58.31	1.36	Dec.
Per cent. of Operating Expenses and Taxes to Earnings.....	60.21	61.93	1.75	Dec.

CHAPTER VII.

The West Virginia and Pittsburg Railroad.—Its Earlier History.—The Weston and West Fork Railroad.—Early Incorporators.—Clarksburg, Weston and Glencille Railroad.—Hon. J. N. Camden.—Lease of the Weston and West Fork Railroad, by the Clarksburg, Weston, and Glencille Railroad, and Transportation Company.—The Narrow Gauge Railroad.—Doctor A. H. Kunst.—Buckhannon and West Fork Railroad. Weston and Centreville Railroad.—Weston and Elk River Railroad.—Consolidation.—Buckhannon River Railroad.—Further Merger of all Lines into the West Virginia and Pittsburg Railroad.—Construction of the Broad Gauge.—Extension of Line to Pickens, and Camden-on-Gauley.—Number of Miles of Road.—Country Penetrated.—Present Management and Condition of the System.—Its Geographical Future.

In the section of country we are describing, the West Virginia and Pittsburg Railroad has played such an important part, that it deserves a minute account. Anything concerning it, is of peculiar interest to the people, from the fact it is a home enterprise, and managed, and directed by home people. The change effected in the country by the construction of this line is so marked that it cannot be properly appreciated, unless the region had been examined before it was built, and looked over subsequently.

On the 2d day of January, 1875, the citizens of Lewis County feeling the necessity for railroad transportation, determined to inaugurate a plan by which a line could be constructed giving their country an outlet. Too much credit cannot be yielded those people who first started the enterprise, by incorporating what was then known as the Weston and West Fork Railroad, to run from Clarksburg, in Harrison County, to Weston, in

Lewis County. (1) This corporation commenced the construction of a Narrow Gauge Line, that was completed by a subsequent concern. On May the 17th, 1878, the Clarksburg, Weston and Glenville Railroad and Transportation Company was incorporated, which company leased the Weston and West Fork Railroad that ran from Clarksburg to Weston. On the 28th day of September, 1878, the Hon. Johnson N. Camden, now one of the Senators from West Virginia, became interested in this line. Having in view then, the construction of a road from Clarksburg to Fairmount, along the line of the Monongahela River, to connect with the Baltimore and Ohio, leading direct to Pittsburg, he turned his attention towards the narrow gauge system. On the 14th day of December, 1878, he was elected President of the Narrow Gauge Road, and the construction begun by the Weston and West Fork Railroad was completed in 1881, from Clarksburg to Weston. Through his control of capital, and untiring energy other steps were taken to open up and develop this section. (2)

(1) The early incorporators of this road were as follows: W. G. Bennett, Henry Brannon, George Ross, L. H. Wood, Thomas A. Edwards, Er. Ralston, A. A. Lewis, W. H. Aspinwall, F. M. Chalfant. The reader will recognize some prominent names in connection with these men. W. G. Bennett, of whom we have already spoken, is a son of the late J. M. Bennett, once Auditor of the State of Virginia. W. G. Bennett was elected Judge of the Eleventh Judicial District of this State, including Braxton, Lewis, Nicholas, Upshur and Webster Counties. He has won an enviable reputation as a fine judge of law, and a gentleman of scholarly attainments, as well as integrity.

Mr. Henry Brannon, a native of Winchester, Virginia, came to this State prior to the Civil War. In 1860 he engaged in the practice of law, and subsequently was elected to the House of Delegates in 1870-71. From 1881 to 1889, he held the position of Judge of the Eleventh Judicial District. In 1888 he was elected to the Supreme Bench of West Virginia, which position he now holds.

The late Dr. Thomas Edwards, and Mr. A. A. Lewis, now a resident of Weston, with Judges Bennett and Brannon, were among the first to make an effort to open the section, that has subsequently proven so rich in timber and mineral resources.

(2) Johnson N. Camden, the prime factor in the development of this section of West Virginia, is justly esteemed one of West Virginia's greatest sons. He was born in 1828, in Lewis County, West Virginia, spending his childhood among the native mountains of his State. In 1846, he was appointed a cadet to West Point, from which position he resigned in 1848. In 1851, he was admitted to the bar and appointed Prosecuting Attorney for Braxton County in the same year. In 1852, he was elected Prosecuting Attorney of Nicholas County, and was engaged in the banking business from 1854 to 1858, when he became interested in the development of the petroleum interests of his State. His success in this line was not less marked than the benefit conferred on the country in which he lived. In 1862, he was made President of the First National Bank of Parkersburg, and the year succeeding found him first

On the 6th day of April, 1882, the Buckhannon and West Fork Railroad was incorporated, to run from Weston, in Lewis County, to Buckhannon, in Upshur County. In May, 1882, the Weston and Centreville Railroad was formed, and leased the former, the name of both being changed to that of the Weston and Buckhannon Railroad, and a narrow gauge road was constructed between Weston and Buckhannon, that was opened for traffic in 1883. Dr. A. H. Kunst, who was elected President of the Clarksburg, Weston and Glenville Railroad, was made Superintendent of the Weston and Buckhannon Railroad, which respective positions he held until the year 1888, when he was elected President of the last named.

The array of obstacles that met this narrow gauge system of forty miles would have seemed insurmountable to an outsider. The management of this line was the cradle in which Dr. Kunst was rocked, when first learning railway experience. It gave him a minute knowledge of railroad matters, that has served him well in later days, when the line has become a large system. He, after a while, began nursing the road. By the practice of strict economy, he made it pay, occupying every post in turn, from that of freight agent and dispatcher, to that of President. For seven or eight years, the little line plodded along, paying its own expenses, and earning all the funds possible. Every

launched into politics, in which he achieved such success subsequently. In 1868 and in 1872, he was the Democratic nominee for Governor of West Virginia. In 1868, '72 and '76, he was the nominee from West Virginia to the National Democratic Conventions, and was elected a United States Senator, taking his seat March 4th, 1881. In this capacity he served until March 3d, 1887. In January, 1893, he was elected to fill the vacancy created by the death of the Hon. John E. Kenna. He took his seat on January 28th, 1893, and his present term will expire March 3rd, 1895.

While Senator Camden has served the people of West Virginia well as a legislator, and they have conferred the highest political honors upon him, it is in another field that he has done, perhaps, more for his fellow creatures. We allude to the development of his state in a material way. With almost prophetic foresight, he recognized years ago the many resources of his state, and by a judicious use of his capital, began the development of them, as we have related. He brought in foreign capital, and energy also, all of which have been expended here at home, showing West Virginia's great wealth, as well as giving her sons and daughters employment in many honorable ways. The logical results of such conduct, without the aid or word of man, has crowned him with by far the best earned of all laurels,—the wreath belonging to the brow of the public benefactor, before which all of his political and worldly honors sink into nothingness. Living at Parkersburg, in the section with which he is so closely identified, he is surrounded by not only the esteem and respect of his fellow-men, but by what is far better—their love and affection.

expedient was used for the increase of traffic. When excursions were the order of the day, flats and box cars were brought into requisition, in which temporary seats were made, and a happy crowd transported from Clarksburg to Weston, or to other points. In 1839, the earnings of the line increased, until the time arrived when the narrow gauge system was to be changed into a broad gauge railroad. (3)

Some time before the events transpired of which we are writing at present, Senator Camden had purchased large mineral rights along the east bank of the Monongahela River, and to bring out the coal from this Pittsburg seam, and to get a direct connection at Fairmount with the Baltimore and Ohio for Pittsburg, constructed the Monongahela River Railroad running from Clarksburg to Fairmount. The construction of this line bore heavily upon the future of the West Virginia and Pittsburg, for the Senator, in speaking of the matter, wrote as follows :

"The building of that line was a considerable factor and inducement in the standard gauging of the West Virginia and Pittsburg system."

At all events, the year 1889, brought a new era to the West Virginia and Pittsburg. On the 10th day of April, 1889, the Western and West Fork Railroad, and the Clarksburg, Weston, and Glenville Railroad, were merged into the Clarksburg, Wes-

(3) Doctor A. H. Kunst, formerly President of this narrow gauge line, and now Vice-President of the West Virginia and Pittsburg Railroad, is so interwoven with the development of this section, that he becomes a part and parcel of its history. It is gratifying to know, that Dr. Kunst, while he has exhibited marked executive, as well as administrative talent, in the management of railway matters, is a gentleman of unusual culture. The latter is probably inherited. He is a native of Taylor County, West Virginia. His father was G. H. A. Kunst, a son of a first lieutenant in a volunteer company against Napoleon the Great. His mother was a daughter of a prominent citizen, who was banished from Alsace-Lorraine in France, on account of Huguenot troubles. Mr. G. H. A. Kunst was first in America, as the representative of a large Bremen house, locating first at Baltimore, Md., afterwards going to Petersburg, Va., where he engaged in the mercantile business. Subsequently, he removed to West Virginia. Doctor Kunst was a graduate of Starling Medical College in Columbus, Ohio. In May, 1868, he was elected Assistant Superintendent of the Asylum for the Insane at Weston, which post he occupied until 1881, when he resigned to practice his profession, but was afterwards elected President of the C. W. and G. Railroad. While at the asylum, doubtless, he laid the foundation for the address delivered by him, entitled: "Freaks of the Brain." This was afterwards published, and gives conclusive evidence of Dr. Kunst's broad cultivation, as well as talent for writing. It seems a pity that such literary ability should not have a broader and more congenial field in which to expand than in a railway office.



Tygart's Creek.

ton, and Midland Railroad. The new company allowed the stockholders five per cent. of the stock held in the former companies. On July 3rd, 1889, the Weston and Elk River Railroad was consolidated with the Clarksburg, Weston, and Midland Railroad on same terms as the former consolidation. Following this merger, the Buckhannon River Railroad was incorporated on the 20th day of July, 1889. (4) During the following September, the Buckhannon and West Fork, and the Weston and Centreville were merged into the Clarksburg, Weston, and Midland. On February 6th, 1890, the latter absorbed the Buckhannon River Railroad, and a reorganization took place under a new name: The West Virginia and Pittsburg Railroad, now held its stand among the systems of the South, and was changed to a standard gauge railroad, with the Hon. J. N. Camden as President, and Dr. A. H. Kunst, of "narrow-gauge" fame, as Vice-President, and General Manager.

The West Virginia and Pittsburg Railroad connects at Clarksburg with the Baltimore and Ohio Railroad, and the Monongahela River R. R. Leaving Clarksburg, it runs southward through Harrison and Lewis Counties to Weston, a distance of twenty-five miles and four-tenths. At this point the line branches somewhat southeast and southwest. The former runs by Buckhannon, through Upshur County to Pickens in Randolph County, a distance of forty-nine miles and some tenths. The Southwest Branch runs from Weston, through Lewis, Braxton, and Webster Counties to Camden-on-Gauley, a distance of seventy-five and six-tenths miles, making a total mileage of one hundred and fifty-six and four-tenths, not including sidings. A

(4) Among the incorporators of these latter roads were some prominent gentlemen who have been identified closely with the development of this section. We refer to Judge John Brannon, of Weston, and Mr. M. W. Harrison, the present accomplished Treasurer of the West Virginia and Pittsburg Railroad; Judge John Brannon, a native of Frederiek County, Va., who came to West Virginia in 1847, and began the practice of law. He was a member of the Virginia House of Delegates from 1853 to 1856, and was in the Senate of Virginia to the end of the war. He was Judge of the Circuit Court from 1873 to 1881, and in every capacity has proven both his ability and integrity. He now occupies the position of General Counsel for the West Virginia and Pittsburg Railroad.

Mr. M. W. Harrison, who is now identified with the road, has been one of its warmest supporters, and co-adjutors from the beginning. He is a descendant of the Virginia Harrisons, a family as old and refined as the State itself, and he has been largely instrumental in the development of this section. He resides at Weston, West Virginia, and is devoting his time and means to the interests of his native State—West Virginia.

branch runs from Flatwoods to Sutton, the county seat of Braxton, a distance of six miles. These lines penetrate a country that has two admirable advantages. It is rich in resources, and is comparatively unopened. Beginning at Clarksburg, the line



Jefferson Rock.

to Weston traverses the fertile valleys of Harrison and Lewis, with the rich coal fields of the Mount Clare section that are a continuation of the rich Pittsburg seam. The fine building stones of Lewis County are penetrated, as well as its fire-clays, and iron, south of Weston. Leaving Weston, the fertile hills and lowlands bordering Stone Creek, and the Buckhannon River lie along the line, until ascending the river the rich timber section of Pickens, with its additional wealth of coal, fire-clays, brick-clays, glass-sands and slates. The forests in this region are magnificent, and yet in their original state. From Weston to Camden-



Scene along the West Virginia and Pittsburg R. R.

on-Gauley, the line opens up the valley of the West Fork through Lewis, with its hills permeated with iron, running southwards toward Flatwoods across the Little Kanawha River and its valley, until Sutton, the county seat of Braxton comes in view. The extension from Flatwoods through Braxton into Webster, where lies Camden-on-Gauley, goes along the wild and romantic banks of the Elk, into probably the finest timbered region in the South. The section has also valuable deposits of minerals, in the way of coal, clays, iron and building stones of rare value. Such is a faint portrayal of the section of country tributary to the West Virginia and Pittsburg Railroad, along its present extensions. The second advantage derived by the system from the region it runs through is the fact it is new and as yet unopened. Millions of feet of timber will have to yield its tribute to this line, in being conveyed to the various marts of man; thousands of tons of building stone will sooner or later come into requisition for constructing material, which in this section is largely increasing in demand. The clays, iron and sandstones, so useful in every way must be carried out over these lines, giving additional freight. All of these resources wait in their native state for the magic stroke of capital that is gradually flowing in under the inexorable law of demand and supply. Already, numerous manufactories and lumber plants have sprung up, giving the line all the freight its present outfit can carry. (5) The output of minerals already give an idea of what is coming for the future in this respect. And so, too, with the timbered resources. (6)

(5) Although this line is but in its infancy, it has a fine showing for the country when examined with reference to its freight hauled. The following gives an idea of the section as a grazing country:

Live stock carried for the year ending June 30, 1893:

Horses and Mules.....	4,754
Cattle.....	69,294
Hogs.....	2,320
Sheep.....	33,511

(6) The following gives some idea of the timber and minerals hauled out:

Minerals and forest products hauled for year ending June 30, 1893.	
Minerals.	No. lbs.
Bituminous Coal.....	407,100
Coke.....	366
Rock, Sand and Clay.....	10,640
Forest Products.	
Lumber and Timber.....	2,193,673
Staves, Shooks, Headings, Hoop Poles.....	81,620
Bark.....	27,711
Wood and Posts.....	2,982

After a careful review, the condition of this line reflects wonderful credit upon the officials managing it. This can be readily seen from a glance at its financial, as well as physical state. With a bonded debt of \$4,000,000, the line has not only paid all expenses of construction and operation, but interest on its bonds. This state of affairs is so unusual, that it necessarily attracts the attention of the stranger, and the admiration of the financier. The passenger, as well as freight traffic, is carefully nursed and handled, while every expense is closely scrutinized by the astute, but pleasant, General Manager. (7) A careful review of the operating expenses, as compared with those of other systems, shows them very small—in fact, so low, that we wonder how the line can maintain its present physical condition. The steady increase of the earnings for the year ending June 30, 1893, is largely in excess of those for year ending June 30, 1892. This shows not only the rigid economy practiced, but increase of traffic in passengers and freight. In the year 1891-92, the earnings were \$287,761.62. For the fiscal year ending June 30, 1893, they were \$402,717.11 Increase—\$114,955.49. The percentage of cost for operating expenses is only 46.8 per cent. of the gross earnings, and a greater part of this was expended in betterment of the property. The showing in every phase is so remarkable for a line as young as this, that we have

(7) The following statement of the Annual Report of the Road for the fiscal year ending June 30th, 1893, gives the number of miles operated, and net earnings:

MILES OPERATED.

Total miles operated up to September 18, 1892.....	109 76
New line added September 18, 1892, Newlon to Pickens.....	9 28
“ “ October 17, 1892, Flatwoods to Camden-on-Gauley,	40 34
<hr/>	
Total miles operated June 30, 1893,.....	159 38
Average mileage operated during this year.....	145 52
Total mileage operated during the preceding fiscal year,.....	109 76

The operations for this fiscal year were on 109.76 miles up to September 18, 1892, when the line between Newlon and Pickens of 9.28 miles was added and opened to traffic. On the 17th of October, 1892, the new extension between Flatwoods and Camden-on-Gauley of 40.34 miles was also opened to traffic, making the total mileage operated from that date 159.38, of which .4 of a mile between West Virginia and P. Junction and Monongahela Junction was under mileage arrangements with the M. R. R. Co., and 1 mile between Monongahela Junction and B. & O. Clarksburg depot was under mileage agreement with the B. & O. R. R. Co.

Gross earnings.....	\$402,717 11
Operating expenses,.....	188,532 20
<hr/>	
Net earnings,.....	\$214,184 91

dwelt with some particularity on the subject. The road has been criticized by some persons on account of its rigid saving, and been accused of practicing false economy, but a careful examination of its service, equipment and physical condition, shows to the contrary. All of these bear the closest scrutiny. Of course the road needs, and will have, as its traffic increases, a larger amount of engines, cars and other rolling stock. But was there ever a railroad that was doing a good business that did not need more rolling stock? That of this line, while taxed to its full capacity, does the work. The service is polite, good, and efficient, having among its employees men of more than average ability than is usually seen in this walk of life. The physical state of the line is unusually good—in fact, is the best of any railroad in this State, probably with the exception of the Chesapeake and Ohio Line. Most of the track is ballasted well—a part with stone, and carries a train over its rails smoothly and nicely. At the regular stations, good buildings may be seen, with comfortable service. When we then see with what economy the system is managed, and yet observe the fine road-bed and physical condition, we dare not withhold our admiration at its management. Justice demands it.

This line has a future in railway history for itself. It is a future not laid out on paper, nor yet in the minds of capitalists. The future arises from its geographical position. Doubtless Senator Camden held this idea in view, when after construction of the Monongahela River Railroad, he determined to make the West Virginia and Pittsburg a broad gauge line. It is the connecting link of the Pittsburg region of Pennsylvania with the South, and the most direct route by over two hundred miles when the line is extended to the Chesapeake and Ohio at Covington, Virginia. Time, that precious commodity that moves the world, will have its way, and for the saving of itself, presses humanity into taking the shortest and quickest geographical routes and locations. The vast mineral resources of the South are putting her rapidly in touch with Northern, Eastern and Western capital. The latter will seek the shortest possible route, and from the manufacturing regions of Pennsylvania to the raw material in West Virginia, and Virginia, the West Virginia and Pittsburg, with the Monongahela and Baltimore and Ohio, hold the geographical key that unlocks the shortest, quickest, and most direct route in the future.

CHAPTER VIII.

The Monongahela River Railroad—Its Route and Distance.—Cause of its Construction.—The Vast Mineral Field it Penetrates.—Its Bearing on this Section.—Effects of its Construction upon the West Virginia and Pittsburg Railroad.—Its Future Part in this State.—Management of the Line.—H. G. Bowles.—Its Service and Equipment.—Traffic Receipts in Coal.

Through the mountains and charming valleys of Lewis County, on through the succulent farming lands of Harrison, into Marion County flows the West Fork River. Just beyond Fairmount the muddier waters of this stream mingle with the brighter ones of Tygart's Valley River, forming one of the prettiest water-courses in West Virginia, known as the Monongahela River. From this stream the railroad we shall now describe, takes its name. It extends from Clarksburg, Harrison County, to Fairmount, in Marion County, winding along the banks of the West Fork River, amidst the most picturesque, and varied scenery in this section of the State. The lovely hills of Harrison and Marion Counties line each side of the stream, that cuts its tortuous way through almost solid banks of coal, iron ore and fire-clays. The route is commonly known as the "Monongah Route," and plays a most important part on this section of the State, although it is but thirty miles in length.

The original cause of the construction of this line was the immense deposits of coal along the region tributary to the road. But its construction resulted in matters equally as great as hauling out coal for the immense coal works along its line. It was destined to change the West Virginia and Pittsburg Railroad from a narrow to a broad gauge, and become as well, a connecting link in the system now running southward from Pittsburg, through Central West Virginia. The mineral field penetrated by this line is beyond a doubt one of the richest in the way of coal in Central West Virginia. It is lined throughout with the celebrated "Pittsburg Seam," that crops out on both sides of the road and West Fork River, from Fairmount to

Clarksburg. The line runs through Fairmount, Monongah, Jackson, Camden, and Clarksburg fields, all of which possess the original seam mentioned above, that ranges from eight to eleven feet in thickness of solid bituminous coal, a good material for coking, steaming, and domestic purposes. The construction of the line was finished in 1888, and the road opened for traffic in 1889. The logical result was, numerous coal mines were opened, and at present, several good towns have sprung up, the result of the construction of this line. (1) The shipment of coal and coke is large, and Monongah product has found its way not only into the Eastern markets, but as far west as the bustling city of Chicago, the distributing point of the products of the Union. In addition to the coal, the section has iron, clays, and stone, which as yet have not been developed fully. As already stated, the iron ore in this region was used by the old "Jackson Furnace," that made a superior grade of iron that was boated down streams to Pittsburg. The minerals of this whole territory are as yet but partially opened, and will afford a handsome traffic in the future for the Monongahela River Railroad, as they have done in the past. In fact, upon the west bank of the river near Lumberport, the immense coal fields have never been touched, and so with those on the east at the same point, that are now owned by Senator Camden.

The bearing of this line upon the section is great for more reasons than one. In the first place, the Monongahela Railroad brings out vast quantities of coal, a large part of which goes east and west. South of the Mount Clare Mines, in Harrison County, no coal mines of magnitude have as yet been developed. So the Monongah Field, through the Monongahela River Railroad, furnishes coal along the line of the West Virginia and P. Railroad in Lewis, Upshur, Braxton, and Webster Counties. In

(1) One of the largest coal works in Central West Virginia is located on this line. We refer to the Monongah Coal and Coke Company, a few miles south of Fairmount. This company, owned principally by Senator Camden, owns the coal territory running north and south for many miles, and has probably the largest output of coal of any other mine in that section. The seam is the regular Pittsburg layer, ranging from nine to eleven feet in thickness of solid, bituminous coal. This field yields a product that is admirable for coking domestic, steaming and gaseous purposes, having been fully tested in every respect.

In addition to this large mine, the line is fairly bristling with works of a lesser nature, all of which do a good business, giving the Monongahela River Railroad a splendid traffic.

addition to this traffic feature, the line opened a passenger traffic that is not a surprise when we consider the location of the line. Passengers in this section who had to visit Wheeling were accustomed to going *via* the Baltimore and Ohio, to either Parkersburg or Grafton. Going either of those ways made a considerable elbow. The construction of the "Monongah Line" from Clarksburg to Fairmount gave a direct route for Wheeling, saving both time and distance, the economizing of which invariably means a saving of money. And now, since the Baltimore and Ohio has finished its line from Morgantown, West Virginia, to Uniontown, Pennsylvania, the Monongahela River Railroad becomes a shorter link in the chain of transportation facilities, that connects the raw material of Central West Virginia with the manufacturing world at Pittsburg, Pennsylvania. It plays a most material part in the railway systems of the State of West Virginia. When this line was constructed, and the Baltimore and Ohio line from Morgantown to Uniontown made a certainty, Senator Camden looked down the vista of the future with his prophetic eye, and saw the prospective iron link between the Pittsburg regions and the southern part of Central West Virginia. At that time Dr. A. H. Kunst was cradling the little narrow gauge line of the West Virginia and Pittsburg Railroad. Suddenly, the latter was changed to a standard gauge, and extended on through Braxton and Webster Counties. The three have now become the Main Line from Pittsburg, south. The gap filled up by the Monongahela River Railroad was a most important one, as can be readily seen at a moment's glance. And in the future it will become a part of the great trunk line that is being gradually constructed to make a direct mode of travel from north to south, by way of Morgantown, Fairmount, Weston, Flatwoods, Camden-on-Gauley, West Virginia, and Covington, Virginia. The construction of most of the line is finished, and on completion of a small gap between Camden-on-Gauley, West Virginia, and Covington, Virginia, the vast coal and iron fields of Central West Virginia will have the gates of Pittsburg opened to receive their raw material.

The management of this line is a careful and prudent one, under the superintendency of Mr. H. G. Bowles, the General Manager. (2) From its incipiency as a public carrier it has been

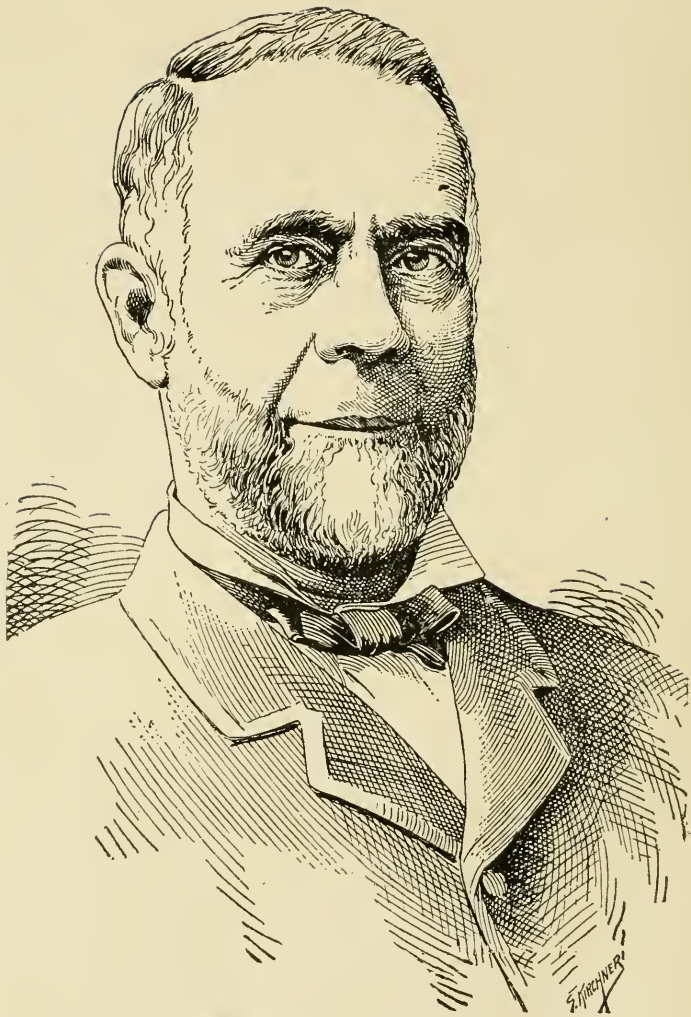
(2) Mr. Bowles' policy is one of unusual conservatism. Though his line is a short one, he has inducted the same care and prudence in his mode of operation that characterizes the greater systems. The discipline he uses is unusually

made to pay handsomely. Some have maintained that the rich mineral field through which it ran was the chief cause. That the material for traffic is necessary to make a road pay is true, but equally true is it that the line under the best conditions has to be properly managed to render it a paying institution. And in this way has the Monongahela been handled by its efficient corps under Mr. H. G. Bowles. The gross receipts are good, while the fixed charges and operating expenses show an economical mode of fiscal dealing in the conducting of the line. (3) The service of the road is excellent, and double daily passenger trains are run between Clarksburg and Fairmount. The equipment, for a short line, is unusually good, being equally as fine as that of many of the larger systems. The line has become a popular route towards the north, having superseded the old ways, and relegated the elbow routes by Parkersburg and Grafton, completely in the back ground. The amount of traffic carried by this line is wonderfully great when its shortness is considered, and as a part of the lines that connect the North and South, the Monongahela River Railroad recommends itself most cordially every way to the traveling public. It is a route that in the future holds a great deal of prominence for the reasons named.

good—more so than the general run of the rest of the systems, and a careful insight into his *modus operandi*, shows us that he possesses unusual capacity for cutting close. No man is more eager than he to increase the traffic of his line, and the results of such management are such as entitle him to be proud.

(3) From the last Annual Report of this company, the traffic sheet is one that reflects a great deal of credit on the system. The fact that this line traverses such a wonderfully rich region, and has now become a part of the through system from Pittsburg, south, gives a signal note to the future of the line. The policy of the Monongahela is to increase its traffic in every way, and the idea of the road's being run in the interest of any one corporation along its line, as is entertained by some, is erroneous. The following is a written statement from Senator Camden, the President, on that subject in answer to inquiries from us:

“Referring to our conversation, and your inquiries in relation to the development of the coal fields on the west side of the West Fork of the Monongahela River in the neighborhood of Lumberport, I will state, that it is the policy and intention of the Monongahela River Road to bridge the river, and make connections with the coal lands on the west side, whenever those lands are ready to be operated, and assurances can be given of sufficient business to justify the expense. This will not only be done at Lumberport, but at other points along the river between Clarksburg and Fairmount. The terms of the contract between the Baltimore and Ohio and Monongahela River Roads will make it improbable, if not impossible, to build and maintain any other road along the valley of the river in competition with the Monongahela River Road, and it is the interest and policy of the stockholders of that road to do what is necessary not only to develop that coal region, but to take care of the business which it expects to do as rapidly as the occasion arises.”



HON. HENRY G. DAVIS.
of West Virginia.

CHAPTER IX.

West Virginia Central and Pittsburg Railroad.—Territory Traversed by the Same.—Inception of the Road, and Cause of its Construction.—Ex-Senator Henry G. Davis.—Extension and Growth of the System.—Hon. S. B. Elkins.—Development Inaugurated along its Line.—Present Status.—Management, Service, and Equipment of the System.—Its Financial State.—Its Probable Future.

The wonderful development of the eastern portion of Central West Virginia, bordering the Alleghany range of mountains, is due principally to the construction of the West Virginia Central and Pittsburg Railroad. The conception of the plan of girding the Alleghany Mountains was bold; its completion a masterpiece of successful energy. This line at present runs from Cumberland, Maryland, to Belington, in Barbour County, and Beverly, in Randolph, running *via* Keyser, Piedmont, Davis, Hendricks, and Elkins, all of which have been brought into life through the building and construction of this line. From Cumberland to Elkins (the Main Line) is a distance of one hundred and thirteen miles, while at Davis, Hendricks, Elkins, and other points are branches ranging from three to thirty miles in length. All these lines penetrate the eastern section of Central West Virginia, draining the counties of Mineral, Grant, Tucker, and Randolph of their immense timber and mineral resources. This line, and the West Virginia and Pittsburg Railroad are peculiarly near to the hearts of West Virginians, and are commonly known as the "Davis and Camden" roads. Conceived, constructed, and now operated by home people, gives them peculiar interest to West Virginia, and everything connected with either is watched with the greatest pride, and an interest almost akin to that of direct ownership.

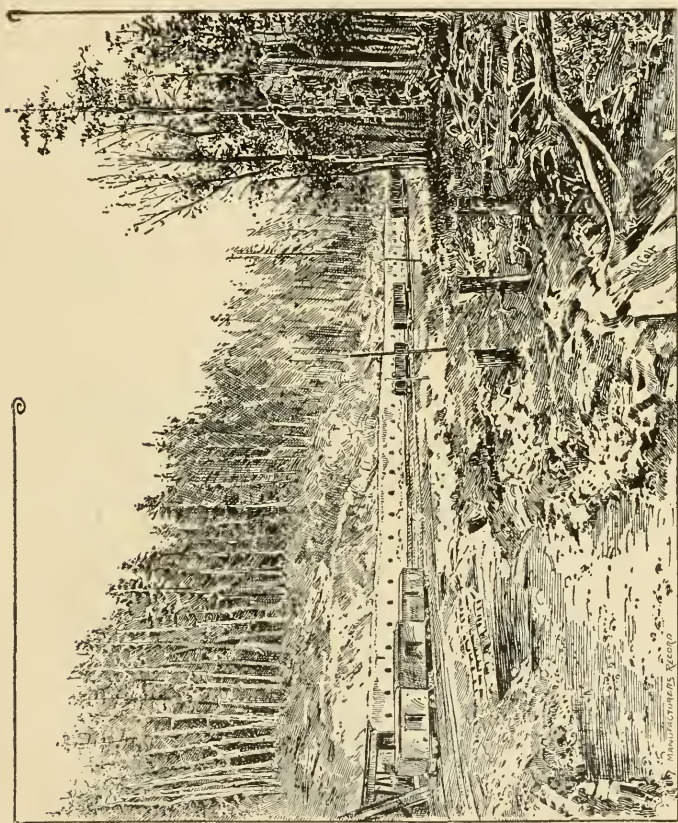
The origin and conception of the West Virginia Central and Pittsburg Railroad, is so closely entwined around the career of Ex-Senator H. G. Davis of West Virginia, that an account of one is almost inseparable from the other. (1) Mr. Davis early became acquainted with the resources of the country tributary to his line, and believing they would enrich those who assisted in bringing them out, succeeded in obtaining the interest of

prominent men in his proposed plan while a member of the Senate. Inch by inch—foot by foot—mile by mile,—was this line constructed southward from Piedmont, until the impassible defiles, immense ridges of the Alleghany Mountains were girded with a steel band, that has been of such infinite service to the State, as well as the country tributary to its line. The subsequent extension and growth of the system was due to the united efforts of Hon. H. G. Davis and S. B. Elkins, lately Secretary of War under President Harrison's Administration. (2) It has become, through constructed and projected lines, an important factor in the railway systems of the South. And its full completion and construction, so far, has been done under the personal supervision of Ex-Senator Davis, the President, resulting in its having been built at the least possible cost.

(1) Connected with the industrial development of Central West Virginia in the east, Hon. H. G. Davis stands out in bold relief. Born in Maryland, in the year 1823, he was bred in the country. Early in life he became connected with the Baltimore and Ohio Railroad, and by energy and pluck, rose fast in the ranks of that system. This accounts for his practical knowledge concerning railway matters. After his connection with the Baltimore and Ohio, he became engaged in business in West Virginia, where his business capacity was exercised with the same sense and judgment that has characterised it since his entry upon the uncertain sea of railway life. In all probability, it was during his business career in West Virginia, that he gained the intimate knowledge he possesses about the resources of the State,—that proved of such wonderful power to him later on. The conception and construction of the West Virginia Central and Pittsburg, across the Alleghany Mountains, is a monument of testamentary evidence of his foresight, energy, and indomitable pluck. In addition to the material wealth and development that has come to Central West Virginia through his efforts, he has been a central figure in the political councils of the State. He was elected to the Legislature of West Virginia, in which state of political life he was prominent. Subsequently, he was elected to the Senate of the United States, where he made an enviable record. It was while he served in this latter capacity, that he succeeded in interesting people of means in the construction of the West Virginia Central. In the vale of life, he is respected by all for his worth, and loved by many for his kindness of heart.

(2) Hon. Steven B. Elkins, who of late years has occupied a conspicuous place in the industrial, as well as political, world of West Virginia, is a native of Missouri. For quite a length of time, he was largely interested in financial ventures in the West, as well as in New Mexico, where success crowned his efforts. Subsequently, he became acquainted with Ex-Senator H. G. Davis, through whose counsel and advice he invested largely in West Virginia's wealth. The combination has proven not only a successful one to the parties concerned, but a most advantageous one for the section of West Virginia in which they are operating. The whole region has been benefited. Mr Elkins has filled several important political positions, and under President Harrison's Administration, before Cleveland's election, was a member of the Cabinet, holding the position of Secretary of War. He is a gentleman of ability and marked generosity.

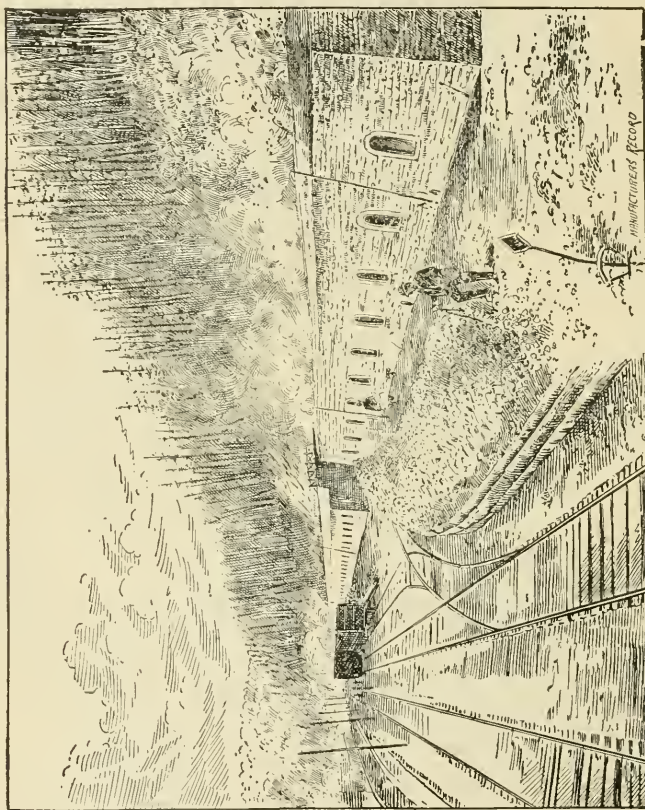
The development that has resulted from the building of this line through the eastern part of Central West Virginia, has been something wonderful. In the first place, the natural wealth in the way of coal is immense, the counties through which the line passes possessing the best seams in the carboniferous period of



Coke Opens, Cumberland Coal and Coke Co.

this State. Mr. Davis' prophetic eye recognized the value of this hidden wealth, so he labored earnestly until he finally accomplished his plans, and laid a permanent foundation for bringing them before the public. The result was twofold: increased prosperity for himself and co-workers, and development of the

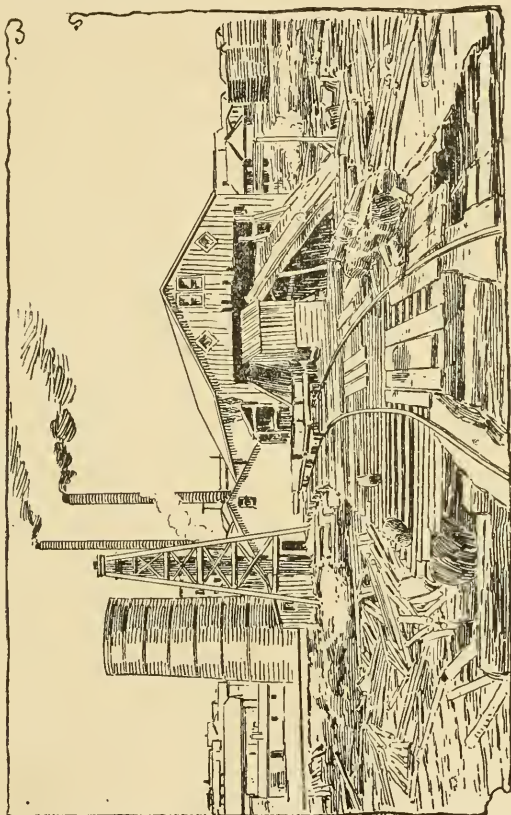
section of country touching the Main Line and branches of the West Virginia Central and Pittsburg Railroad. Whatever increases the list of necessary commodities, stimulates commercial activity, and gives employment to labor. This material progress is the bone and sinew of prosperity. Any undertaking



Coke Ovens, Davis Coal and Coke Co.

that draws upon nature's handiwork for material, that has to be extricated through mental as well as physical power, gives employment to mankind, the greatest boon that can be conferred upon humanity. To thread the labyrinth of passes and defiles in order to ascend the Alleghanies, as this line does,

meant not only the expenditure of large sums of money to accomplish it, but the necessity for renewed expenditures to bring out the raw material from which source a profit was to be derived. All of this the West Virginia Central Line did, and the results are highly satisfactory.



Blackwater Boom and Lumber Co.

The numerous industries flourishing along the line now; the propinquity of newly-made towns give evidence of the rapid material progress that has taken place. A few years ago, before the 1880s crept silently over the dial of time, this region was virtually wild. The head-waters of Potomac River leapt downward undisturbed by the music of the handsaw, and the ringing

sound of the pick in the cold. The waters of Blackwater Run, flowing down on the southern side of the mountains formed their eddying pools in total silence, save for the roar of the cataracts, and cascades that now lie hundreds of feet below the railroad in a perpendicular manner, causing the eye of the traveller to become bewildered as he glances downward at the dashing waters. Everything was wild—even nature's sublimity, that overhung the whole like a cloud of mystic scenery. To-day, the hum and stroke of work can be heard on all sides; the growing towns, and gigantic lumber plants, with the rich coal mines, present a business activity that impregnates the air around. Bayard, Wilsonia, Davis, Coketon, Gorman, Fairfax, Douglas Hughlin's, Hendricks, Bretz, Parsons, Dobbins, Montrose, Elkins and Belington, are towns ranging from two to fifteen hundred people, that have grown from the opening of the mineral and timber resources in this section. The vast coal fields penetrating Mineral, Grant, Tucker and Randolph Counties are the line traversed by the West Virginia Central Railroad, and its avowed object being accomplished, that is, to haul out this product, has developed the whole section in a marvellous manner. In addition to the natural wealth here, the policy of the West Virginia Central has been an aggressive one for material progress. (3)

The present status of this line is a very creditable one in every way. The interests of the road are fostered and cared for

(3) The act of the West Virginia Central in running parallel with the Baltimore and Ohio from Piedmont to Cumberland, has had the effect of assisting the material progress of this section materially. Railroads remind us very forcibly of the female sex in two respects. They love to coquet, and hold the balance of power. When they perceive the latter is gradually slipping from them, they will use any reasonable—and in many instances unreasonable—means to retain it. And like the female again, they are indispensable! No undertakings ever instituted by man have been so useful and so great a service to our country as the railroads. And the legislature which is eternally passing bills to elog their progress, and throw obstructions in their way is *unwise*. The law-makers should nurse, foster and encourage them as much as possible, in order to have as many as can be gotten in a State. For experience teaches us that the only power which can govern a railroad, and keep it entirely within bounds, is *competition!* And competition between railway systems is the most reliable engine of development we can name, for causing a country to progress rapidly, and grow rich through commercial and manufacturing interests. The object of the West Virginia Central in running to Cumberland was to connect there with the Cumberland Valley Division of the Pennsylvania Line. This competition between the Baltimore and Ohio and West Virginia Central brought in many a plant along the latter that has added materially to the wealth of the country.

in the most prudent manner. The industries from which the line draws its traffic are given every possible facility for increasing their capital and doubling their output. The vast raw material in the way of timber and minerals that must be utilized to create traffic, is so extensive the company can confidently give every facility which will increase the power of bringing it on the line of the road for traffic. The management is a progressive one—as much so as it is consistent with railroad policy to be. The roadbed, rolling stock and equipment is on a high order, while the service is equally as good as that of any other system we can name. The line, as well as property of the company, show a very judicial handling, possessing the appearance of being well-cared for in every respect. (4)

From the foregoing facts, it is readily seen that the financial state of the system is a sound one. The traffic has steadily increased as the line was extended, until the showing now made is one of unusually good results. To further increase its traffic, several branches to the Main Line have been constructed, while others, in course of construction, are supported and encouraged by this line. (5)

The branch running from Thomas, on the Main Line, to Davis, a town of fifteen hundred people, some six miles distance, is a paying one. At Hendricks, the Dry Fork Railroad Company have begun the construction of a line to run thirty miles southeast, to open up the vast timber resources lying on the property of the latter company. This branch will not only prove a good feeder for the West Virginia Central, but is destined to play an important part in the future of the line. At Roaring Creek, five miles west of Elkins, on Tygart's Valley River, a branch is being constructed to open the coal fields in that immediate region, of which we have already spoken in the chapter on the resources of the section. This extension will ultimately prove a most valuable arm, owing to the wealth it penetrates on Roaring Creek. Already the line has a very large traffic in coal from the Elk Garden, the Upper Potomac, the Belington extension, and Piedmont and Cumberland Rail-

(4) Mr. C. L. Bretz, the General Manager, on whose shoulders falls the important duty of managing the Road, is fully equal to the occasion. Reared in the railway service, he was trained under the *regime* of the Great Pennsylvania System, that inducts practical knowledge, as well as discipline, into everything. Both of these requirements have been brought by him into his work on this line, and the results from it are manifest and apparent.

way. (6) The future of this line is destined to play an important part in the railway history of this State. It connects, at present, with the Pennsylvania System at Cumberland, Md. It has several projected lines that will be of marked advantage to the future material prosperity of West Virginia. A line is now projected from Cumberland to Hagerstown, by which route an entrance into Baltimore could be effected. The Dry Fork Branch, running from Hendricks, will ultimately be extended, and at no distant future day, the systems will, doubtless, tap the Chesapeake and Ohio Line at the White Sulphur Springs, in Greenbriar County. A prospective line is now in view, from Belington to Clarksburg, to touch the West Virginia and Pennsylvania Railroad, that has been surveyed from Clarksburg to Brownsville in Pennsylvania. From the present condition of the line, with its material wealth, and the future in view, the West Virginia Central has one of the brightest prospects that we know of, in connection with railway improvement in the South.

(5) From the following statement, it will be seen that for the year ending June 30, 1893, after paying every fixed charge, the income of the road was \$137,833 17. Twelfth Annual Report. 3.

RECEIPTS, TRANSPORTATION, ETC.:		
Passengers,	\$ 91,735 61	
Coal and Coke Freights,.....	182,328 51	
Other Freight and Express,.....	159,819 44	
Car Service, U. S. Mail, etc.....	106,435 72	
Miscellaneous.....	11,446 59	
		\$551,765 87
EXPENDITURES:		
Maintenance of Way,.....	\$130,565 20	
Maintenance of Equipment,.....	48,497 86	
Conducting Transportation,.....	112,755 14	
Car Service and General Expense,.....	40,637 91	
Miscellaneous,.....	3,304 41	\$335,760 52
		\$216,005 35
Percentage of operating expenses, (not including taxes) to receipts, 61.08		
Net gain to West Virginia Central from operating Piedmont and Cumberland Railway at 60 per cent. of gross earnings,.....		91 16
During the year ended June 30th, 1893, the Company has mined and sold from its Elk Garden Mines 369,510 tons of coal, at a profit (not charging against this, however, its proportion of interest, taxes, and general expenses of the Company), of.....		88,554 12
Add profit on sale of coal made at Baltimore office.....		56,000 00
		\$360,650 63
Deduct interest on bonded debt, payable January 1st, 1893, and July 1st, 1893,.....	\$177,045 00	
Taxes, etc.,.....	27,421 46	
Deductions made for depreciation in value of mining plants, hotels, etc.,.....	18,351 00	\$222,817 46
Net income, after paying fixed charges,...		\$137,833 17

(6) The following statement gives the shipments of coal from this line for each year since 1881:

MINING.

Total Shipments of Coal from all Mines on the Line of the road from October 30th, 1881, when the first shipment was made, to July 1st, 1892, were as follows:

Year.	ELK GARDEN REGION.							UPPER POTOMAC REGION.								
	West Va. Central—Tons.	Big Vein—Tons.	Davis & Elkins—Tons.	Atlantic—Tons.	Virginia—Tons.	Hampshire—Tons.	Switchback—Tons.	Merrills—Tons.	Davis—Tons.	Thomas—Tons.	Douglas—Tons.	Spring Garden—Tons.	Fairfax—Tons.	Bayard—Tons.	Junior—Tons.	Total—Tons.
1881	11,372	28,774	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	11,372
1882	228,204	28,774	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	257,068
1883	261,075	68,942	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	330,017
1884	375,500	83,170	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	458,760
1885	268,780	65,792	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	401,350
1886	211,852	50,686	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	346,929
1887	259,591	59,801	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	448,821
1888	556,255	30,407	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	563,598
1889	553,216	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	560,345
1890	414,547	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	700,240
1891	420,503	538	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	823,874
1892	183,715	1,812	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	400,136
	3,344,557	389,922	212,987	569,426	7,850	4740	26,128	1872	522,884	170,890	46,723	3233	712	257	363	5,302,510

* For the Six Months of 1892, ended June 30th. 1893 slightly in excess of 1892.

CHAPTER X.

Agricultural Resources.—Products of the Section.—Stock Grazing.—Horticulture.—Fruit Culture.—Grape Culture.—Dairy Farming.—System of Culture in the Region.—Uncultivated Lands.—General Remarks on the Subject.

The capacity of this section of West Virginia, as an agricultural country, is improperly judged by many passing casually through its borders. The mountainous aspect does not impress the beholder favorably on first sight. But a closer inspection will soon disabuse his mind. In the discussion of this subject, we shall judge the country by what it is capable of, and not condemn the whole on account of a bad system of tillage of a part. The agricultural phase of the region may be divided in two parts: the system of culture, and productions of the valleys, of the streams, and the mountains and hillsides. In Barbour County we see a fine lot of agricultural lands, bordering Tygart's Valley River and other streams. Taylor, Harrison and Marion possess some fine country, while Lewis, Braxton, Nicholas, Grant and Mineral and the other interior counties have good farming lands bordering the waters of the various streams. Wood, Jackson and Mason, along the Ohio River, hold the highest reputation as farming lands, possessing much of the alluvial bottoms of the Ohio, that are famed, far and near, for their productiveness. In all of the counties, on the hillsides, some fine crops are produced, and grass raised for stock.

The products of the section may be said to be: wheat, oats, rye, barley, corn, hay, and vegetables, with some fruit-growing and dairy-farming. In the limestone regions of the section, and on the Ohio River, the cereals produce well, and are raised in surplus quantities. Large amounts of grain are shipped abroad from the section bordering the Ohio River, as well as other regions in the limestone country. Still, there are other counties devoted principally to grazing, in which the production of grain is small. The tables given in the notes appended hereto, give an idea of the productions of the cereals

and hay, as well as showing the counties that raise them in less quantities, where stock-grazing is the staple. (1) In some favored regions the average yield of wheat is from fifteen to twenty bushels per acre; of oats, twenty-five to thirty bushels; of corn, fifteen to forty bushels; of hay, two-and-a-half to three tons per acre. The foregoing yield is that taken from Wood, Jackson, Mason, Harrison, Upshur, Mineral, and the counties that are best in an agricultural sense. The rest of the sections will average from eight to fifteen bushels of grain per acre, and one-and-a-half tons of hay. Owing to the elevation of the lands; the frequent showers and heavy dews in the summer season, grasses do remarkably well, and timothy, red top clover, lucerne, Ger-

(1) The table following gives the average yield of crop per acre in this region:

COUNTIES	WHEAT.			OATS.		CORN.		Meadows.	Pas	Potat's	Ap.									
	Yield per acre.	Bush.	Price per bushel.	Yield per acre.	Bush.	Probable yield per acre.	Bush.	Probable price per bushel.	Yield per acre.	Tons.	Price per ton.	Condition compared to October 1st, 1892.	Per cent.	Probable yield per acre.	Bush.	Price per bushel.	Condition compared to full crop.	Per cent.	Condition compared to good healthy condition.	Per cent.
Barbour.....	14	75	105	14	45	22	65	1 1/2	15	00	85	70	50	95	105					
Braxton.....	10	75	100	25	40	25	50	1 1/2	18	00	50	50	50	50	86	95				
Calhoun.....	9	75	105	10	40	27	50	1 1/2	10	00	50	70	50	40	90					
Clay.....	10	75	100	25	35	35	50	1 1/2	6	00	100	95	45	50	100					
Doddridge.....	11	65	110	28	45	32	60	1 1/2	16	00	75	110	45	35	100					
Grant.....	11	65	100	28	45	32	60	1 1/2	16	00	75	110	45	35	100					
Gilmer.....	14	75	100	30	40	40	35	1 1/2	12	00	90	75	40	85	100					
Harrison.....	16	75	100	25	40	30	60	1	11	00	100	85	50	20	100					
Jackson.....	11	60	100	14	40	26	50	1 1/2	9	00	85	55	60	20	100					
Lewis.....	16	65	100	30	40	25	60	1 1/2	13	00	55	95	45	30	100					
Marion.....	13	75	95	23	45	35	65	1 1/2	18	00	85	85	65	30	100					
Mason.....	12	60	95	27	30	32	45	1 1/2	13	00	75	55	55	45	100					
Mineral.....	10	65	80	35	35	25	50	1 1/2	12	00	93	80	50	80	95					
Nicholas.....	17	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pocahontas.....	15	85	105	30	45	47	100	2 1/2	15	00	100	50	50	5	100					
Randolph.....	16	75	100	22	45	25	80	1 1/2	18	00	80	155	65	50	100					
Ritchie.....	17	65	80	35	45	25	50	1	16	00	70	80	40	20	80					
Roane.....	9	65	100	8	35	24	55	1 1/2	12	00	95	30	50	80	95					
Taylor.....	15	75	100	20	40	20	55	1 1/2	16	00	80	85	50	20	90					
Tucker.....	20	75	100	20	50	15	75	1	22	00	75	50	60	50	100					
Upshur.....	11	75	105	20	40	20	60	1 1/2	15	00	60	125	50	35	90					
Webster.....	10	75	75	22	45	27	55	1 1/2	13	00	80	45	45	45	85					
Wirt.....	10	60	100	9	50	5	75	1	15	00	80	25	50	10	100					
Wood.....	12	60	80	27	35	25	55	1 1/2	15	00	70	40	60	10	85					

man millet, English red top, and orchard grass, make fine hay for forage. The land takes kindly to grass, and the latter is undoubtedly a fine fertilizer for the soil. (2) Among the mountainous part of the lands vegetables in season are produced with little trouble and expense. Particularly true is this with reference to potatoes and cabbage. Wherever the hillsides are cleared, these staples can be raised in large quantities, with a handsome return on the money invested. Some of the finest cabbage and largest potatoes we have ever seen were produced in this section of West Virginia. Along the Ohio River, and in the mountains, fruit growing is prosecuted just sufficiently to show that peach, apple, plum, and grape culture, would yield a rich profit, if properly nursed and attended to, and each class of fruit pitched in its true section with reference to climatic influences and proper exposure. Nearly every county produces a surplus of milk and butter, large quantities of the latter of which are taken by the merchants in the way of trade for merchandise, and shipped to the cities East. Unless a diligent inquiry was made, we would have no idea of the large amount of the butter, eggs and poultry raised by the housewives of the farmers, and exchanged for the various commodities of life. (3) This system has opened a regular line of traffic between the merchants and Eastern markets. And the extent of the business would never be recognised without a careful insight into all its various ramifications.

Wherever the lowlands and valleys of the section are put in grasses for hay, and wherever the lands on the plateau of the mountains, as well as along the hillsides, are cleared, a fine sod comes over the surface. The logical result is, the country is a

(2) The lands take naturally to grass in most of the counties. If clover was used more as a fertilizer, the agricultural state of the country would be improved.

(3) It is a prevalent idea with strangers to the country, that the section does not produce enough for home consumption, since the many manufacturing plants and mineral works have been started. A careful investigation shows this opinion to be extremely erroneous. In the country, and at nearly all the small towns in the region, there are numerous merchants, who do all their business by way of barter and exchange. They take in lieu of their merchandise, grain, dried fruit, eggs, butter, meat and poultry. This is shipped East by them and sold. The towns along the railroads that purchase their supplies in the cities, buy, in many instances, the same necessities that are raised in a surplus around them, gathered up and sent to the cities by the various merchants throughout the country, who have, in many places a regular line of semi-weekly shipments.

fine stock grazing one Horses, cattle, sheep and swine do well, and are raised in large numbers in some counties of which we are writing. Cattle raising is one of the chief staples of the country. Hundreds of carloads are shipped annually for beef to the eastern marts, and in Lewis, Harrison, Wood, Jackson and Mason, an export business to Europe is done in this line. Houses in Europe have standing buyers heré, who purchase in carload lots on orders. (4) The rearing of a better class of horses is now indulged in than the old connestoga stock, and the superior breeding in this line tells as in everything else. The high-bred horse is better for every purpose than one of ordinary breeding, and the citizens of the country would do well to profit by the small experience already gained in this line, and devote more of their time and energy to rearing a finer grade of horses than ever. The scrub horse eats just as much as a thoroughbred; requires the same pasturage and housing, yet he will command one-third less money than the other. The well-bred horse is not only fit for farm purposes when called on, but can bring his worth at a moment's notice in almost any city market. There is ample room for improvement in this line, and the agricultural men should profit by the wisdom and experience of those who have inaugurated a higher breeding in horses in the region. (5)

(4) From statistical returns the following table gives an idea of the stock business in this part of West Virginia :

	Horses.	Cattle.	Sheep.	Swine.
Barbour... ..	4,250	12,852	14,829	743
Braxton	3,398	9,936	10,156	1,142
Calhouu.....	1,573	4,507	3,324	300
Clay.....	778	3,237	2,292	957
Doddridge.. . . .	3,304	8,860	19,377	728
Grant.	4,044	9,208	18,704	829
Gilmer	2,549	6,992	8,680	437
Harrison.....	7,684	19,342	37,396	1,324
Jackson	3,840	9,540	14,044	368
Lewis... ..	4,882	14,128	24,385	652
Marion.....	5,818	12,797	22,214	1,823
Mason	4,399	10,684	11,221	795
Mineral.....	3,407	8,920	16,208	754
Nicholas.....	2,286	8,761	9,860	1,955
Pocahontas	2,152	7,303	12,857	520
Randolph	2,929	8,621	11,524	881
Ritche	3,820	10,557	18,493	373
Roane	3,633	10,320	15,010	270
Taylor... ..	2,558	6,792	8,257	807
Tucker.....	1,104	2,228	2,056	291
Upshur.....	3,692	9,474	13,339	1,023
Webster.....	1,136	3,595	4,561	1,127
Wirt.....	1,719	4,589	3,063	318
Wood	4,998	9,352	7,628	318

(5) Too much stress cannot be laid on the importance of improving the breed of stock. In the Blue Grass Section of Kentucky; in Shenandoah Valley,

Wherever this has been done, the results both in a commercial way, as well as that of pleasure, have been most gratifying. Every element for the rearing of fine stock of every class exists in this State, and their freedom from disease is something remarkable. The sheep husbandry is prosecuted here to some extent—sufficiently indulged in to show two things: that it is one of the most profitable modes of agriculture; and, that the climate, range and grass is so extensive it might be increased a hundred fold. Every farmer who has been engaged in sheep-raising adds his testimony to the fact that the country is peculiarly adapted to it, and the profits from the wool and lambs give a higher percentage on the money invested than on any other class of farming. (6) And that the section is good for the

Virginia; in the valley proper of the "Old Dominion," the good results from careful and improved breeding have been manifest in every way. And the man who commences to improve the stock in a country becomes, more or less, a public benefactor. In this direction too much commendation cannot be given to Judge J. K. Bennett, of Weston, Lewis County, West Virginia. Sensible of the needs of his country in this respect, he has introduced a strain of both running and trotting stock that will enhance the value of the horse immensely in the region of which we are writing. Some of his racers in both classes of work have met with marked success. Judge Bennett's high position, both socially and officially, gives a weight and tone to the rearing of race horses that sets a worthy example to the young, and it is to be deplored that many more gentlemen of the same kind in the section have not followed in his footsteps.

(6) Mr. M. V. Richards, editor of the "Baltimore and Ohio Field," in the admirable article we have quoted from before, has this to say on the subject of sheep-breeding:

"West Virginia is peculiarly well adapted to sheep raising. The limestone soil, while it has sufficient calcereous matter to insure fertility, is of such a character as to retain no water on its surface, and contains no element which would have a tendency to injure the feet or fleece of the sheep. Hence, when the sheep are shorn, the wool is soft, white and pliable.

"The whole state is dotted over with hills and valleys, and watered by evergushing streams and refreshing springs. The purity, sweetness and invigorating character of these never-failing supplies, meet every need of the husbandman.

"Other decided advantages possessed by West Virginia over the New England and other sheep-raising States, is not only her fertility of soil which allows the greater variety and quantity of agricultural product, but her genial climate, thus materially shortening the period which necessitates housing sheep, because, as a rule, the pastures are a living green almost the year round.

"The fleece of a thoroughbred American ewe, which has been properly summered and wintered, ranges from ten to eighteen pounds, while a buck's weighs from fifteen to twenty-five. The malarial and scab diseases so common and fatal in other States are not known among the West Virginia sheep breeders.

"Even during the hottest months due to the peculiar adaptability of the climate, the shepherds can always find a high and dry range for their flocks. * * * * * The State is capable of sustaining many hundred thousand more sheep, not only for wool and breeding purposes, but the nearby markets also insure large profits in lambs."

purpose no one will deny who is at all cognizant of the matter. By careful and prudent management, and in improvement in breed of stock, no country would give a more remunerative return in every way.

There is another source of wealth from the soil just beginning to bud in this section, which would bring means to the people if properly prosecuted. We allude to the culture of small fruit—grapes particularly for making wine, and for shipment. The success of wine-makers in sections not more propitious than this, should be a strong stimulant to the inhabitants here. It seems just a little strange that fruit culture has not been prosecuted more vigorously here when we consider all the conditions for its success. In many of the counties we are writing about, the sunny southern exposures are admirably adapted to grape culture. The soil is comparatively new, permeated with more or less of decomposed rock coming from the shell period of the Devonian age, and on many of the descents is composed of a light gravelly earth, suitable for grapes, as well as other small fruits. Almost any farmer can give the attention necessary to the cultivation of a vineyard in this section, an experienced person being required only for pruning. In some parts of the section, especially along the Ohio River, there are four vineyards which pay handsomely. Other fruits, such as apples, plums, pears, and peaches can be grown with success, if the proper varieties are put on the right location. The apples raised in Lewis County have quite a reputation.

Dairy farming, of which we have casually spoken, can be said to be a successful branch of agriculture here, when we consider the amount of butter shipped to the Northern and Eastern markets. Yet this important industry does not have the attention it is entitled to as a staple commodity of the region. The immense acreage of pasturage gives the foundation for numerous creameries, cheese-factories, and the like. The people could with profit substitute the old hackneyed régime of a rotation of a few crops for this kind of agriculture. The capital put upon land for the production of butter and cheese is much less than that expended in cultivating cereals, besides improving the land. This class of tillage is called for more than ever in the past few years. Owing to the number of manufacturing plants springing up, with the towns and cities they create, a demand for vegetables, poultry, milk and butter is growing, and

to supply these the system of farming should be greatly changed and the lands put in proper condition.

The system of culture, or tillage, employed by the inhabitants of a portion of the region has not only lessened the profits to the owners, but given an erroneous idea to the public of the country as an agricultural section. While a part has been used carefully, and cultivated judiciously, much has been treated abominably. It may be that the large extent of territory has something to do with it, but in many places lands are cleared out; crop after crop is grown until the rich, virgin soil is exhausted. No rotation or diversity of productions are resorted to; no lime, bone or fertilizer used to recuperate the soil; no grass sown to fertilize it. The result is incapacity to produce in a few years, and a wrong impression given to strangers about the country as a farming one. The sore spot is soon deserted, while a new one is cleared, and the same thing gone over again. The work of continual clearing impoverishes the owner; continued cultivation without manuring, or recuperating, wears out the lands, and a mode of tillage is handed down from sire to son, that would impoverish the richest agricultural country on the globe. A rut of cultivation is established, from which it seems hard to drag many of the tillers of the soil, who, when approached with a better and surer method, are apt to say: "the ways of my fathers are good enough for my wants." Their condition in life, clothes, houses and lands, stand as a monument of contradiction to that old saying, that sounds as unwise as it is trite and homely. A diversity of crops, with judicious use of grasses, bone and lime, would render these people prosperous and comfortable, who are disposed to visit all their ills upon "unwise legislation against the farmer," as they term it.

Notwithstanding the large acreage under cultivation in this territory, there are hundreds of thousands of acres within its borders that might be brought into requisition, and increase the general revenue of the country. Many of these lands are capable of a high state of production, only waiting for the capital and energy of man to bring them into a good producing section. Farmers, both North and East, have but little idea of these regions, and an examination of them would reveal the immeasurable superiority of this over other countries, in the way of climate and soil. Many acres of these lands can be purchased from five to fifteen dollars per acre, which, if properly tilled, would fully equal the agricultural region of the moun-

tainous country of Pennsylvania. All they require is energy and some capital to develop their agricultural resources. The rapid improvement that the past few years has brought since the construction of the railway systems in this portion of the State, is but the beginning of an end, upon which no one can prophesy as yet. The opening up of the immense timber and mineral resources of the State, and the building of settlements and towns, must create more and more demand, to supply which energy and capital will come to reclaim every acre possible in this section to produce the necessaries of life. Miles upon miles of this territory are still unopened, with a fine grade of lands. All through the valleys, up the foothills of the mountains, and along their bases and sides, the bright green of the laurel still contrasts with the crimson of the sumac, and the white of the dogwood. The leafier branches of the hickory, the oak and the chesnut, shade the violets and pansies as well as a rich, but unkept and uncultivated soil. Through the golden autumnal season for ages the leaves of the linden, the alder and the hawthorn have first assumed their golden hue, and amid winter's chilling winds fluttered to the ground to enrich the soil. Under this canopy of leaves lies great wealth, merely wanting the magic touch of energy and capital to blossom and bring forth the fruits of the earth in due season.



CHAPTER XI.

Timber Interest in this Section.—Different Varieties.—Hardwoods.—Virgin Forests.—Manufacture of Timber.—Facilities of the Section for Woodworking Plants.—Description of Some Lumber Plants in Operation.

(The timber interests of West Virginia were the first that practically attracted foreign capital, and has been a source of great revenue to the native citizens as well as investors.) We approach this subject with great delicacy, because so much has been said and written on the matter, that some people have an idea that West Virginia is one boundless forest of virgin timber. Such, however, is not the case. But some sections of the State possess more timber than any other State we can name, and in writing on the subject we shall address ourselves simply to the facts. There is not another country in the North, East or South that has the boundless tracts of forest possessed by the Appalachian region in this section, As a whole, West Virginia's timber may be said to consist of two classes: forests that have been cut over, and forests that are uncut. The difference in the two types of timber consists not so much in difference of the number and sizes of the trees, as in other respects. The forest that has been cut away possess just as large trees, and as many in instances as the virgin forest, but the difference is the effect that cutting, and some clearing, has upon the growth and quality of timber. Forests that have been thinned have more worms and windshakes, and are more subject to firescalls, hurricanes and storms than the uncut, or virgin timber, for which reason the latter is more valuable, even if less in quantity. In the counties of Barbour, Tucker, Taylor, Lewis, Upshur, Roane, Wirt and Jackson, there lie many acres of forest of good merchantable timber that has been cut over. In some portions of these counties lumber is being manufactured still, with room and quantity for others, But in Randolph, Webster, Pocahontas, and a part of Gilmer and Greenbriar, a primeval forest stands, that is far superior to any timber we can name. The principal part of the

forests in the counties named lie in the vicinity of Camden-on-Gauley, in Webster County, and Pickens in Randolph County. The forests of this section include almost every variety: walnut, oak, hickory, hemlock, spruce, poplar, ash, juniper, dogwood, birch, maple and burr oak, with chesnut, Spanish-oak, post-oak and chesnut-oak. Some locust is found. While in some sections the axe has been handled extensively in felling a portion of it, but little impression has been made as yet upon the main body of the timber. Hundred of thousands of acres are still untouched, and a visit to the forests gives us some idea of its boundless extent.

The Appalacian range of mountains in a large part of the region, with its arms, spurs and subspurs shooting out here and there, are clothed on their sides and tops with forests of valuable timber. The ash, the maple, the hickory, in all their varieties, tower here in primeval majesty. On many a square mile the lumberman's axe and saw have never been heard, nor a tree taken from its native position. The stranger in quest of knowledge of the timber lies upon his back and looks upward to where the tendrils of the scuppernong, and the fox grape, cling to the topmost branches of the trees, and is unable to see a piece of blue sky that will make a ribbon large enough for the rustic beauty's neck, whom he left in the cove below, lingering around the hallway when he last saw her. The capitalist erect, and with the thrill of speculation in his veins, sees the huge monsters that have stood for centuries awaiting the music of the hand-saw and jig, and in endeavoring to calculate the amount of lumber they would make, soon finds his mind submerged in a sea of figures. Even with modern machinery, and the best facilities for shipping, it will take years to strip these mountains of their native timber. Calculation is indulged in by the forest visitor, as he sits up to get a view of the surrounding trees. Thousands run into millions—millions into billions, until his arithmetical education seems to have deserted him, or becomes suddenly deficient as he sinks back to look through the vines of the scuppernong, and fox grapes above, into the dense foliage beyond, while his mind reverts to the rustic beauty in the cove below. He feels that it needs no calculation to inform him that West Virginia's timber resources are great.

The number of feet per acre of timber in one of these primeval forests cannot be calculated to a nicety; yet some estimate may be given. We can safely assert that the timber forests of

West Virginia in this region will average not less than 5,000 feet per acre. To the owners of many of these forests this estimate would be discarded with derision, but it suits admirably because we know it is safe. The quality of the timber is most satisfactory. Some of the trees have yielded an immense amount of manufactured lumber, and a glance at their size gives us unbounded respect for West Virginia's product in this line. (1) The timber when cut goes far beyond the average log in quantity, and runs from 65 to 70 per cent. in 1s and 2s, the best grade of lumber manufactured. Certainly, we know of no region in any State that can excel this section of West Virginia in lumber.

When we consider the boundless extent of this material here, and the further fact that the virgin forests of Webster, Randolph, Pocahontas, Greenbriar and Gilmer are penetrated by the West Virginia and Pittsburg Railroad, we feel that it should be the centre of wood-working industries. The opinion of others, on whose judgment we can rely, is the same as our own on this subject. (2) Competition is a powerful engine in trade

(1) Colonel J. A. Fickinger, a native of Northeast Ohio, and formerly Engineer-in-Chief of the Ohio River Railroad, and the West Virginia and Pittsburg Railroad, and now Manager of the Gauley Lumber Company—a gentleman of unquestioned veracity, gives the following measurement of a tree milled at his factory:

2	logs	60	inches	diam.	16	feet	long	scaled,	5,972	feet,
1	"	63	"	"	16	"	"	"	6,802	"
1	"	63	"	"	12	"	"	"	2,611	"
1	"	69	"	"	10	"	"	"	2,641	"
2	"	broken, scaled							6,761	"

The product was scaled by the usual board measurement, and is something so anomalous that we scarcely wonder at its taking the premium at the World's Fair, Colonel Fickinger, whose knowledge on the subject, as well as intelligence, entitles him to speak, says as to the average timber:

"The general average of the run of logs may be said to be from 300 to 600 feet."

(2) It is not our habit to quote except from the statements of those from whom true information can be gathered. In a description of the coal and timber resources in this section, gotten out by Mr. M. V. Richards, the talented Editor of the "B. and O. Field" we have the following statement on the subject of wood-working plants;

"The marked advantage of the country along the West Virginia and Pittsburg Railroad for the establishment and successful operation of factories for the making of furniture of all grades is visible on every hand. The greatest variety of timber is obtainable at low figures; the saw-mills are ready to contract to furnish their product, or the furniture manufacturer can buy the timber in the stump, and work his own product. It is only a question of time when furniture factories will be numerous along this line; already some are started, and the manufacturers located elsewhere will soon appreciate that in order to compete they must get right on the ground where the timber grows. It is not uncommon to see car-load after car-load of timber passing out over this railroad billed to furniture factories in the North and West."

at the present day. The manufacturer must, and should consult where he can get the cheapest raw material in largest quantities, and at what point he can save a surplus haul on useless raw material. That state of affairs must eventually drive many manufacturers of wood into this section. And a better field cannot be found. Material is cheap and plentiful; labor can be had here on as favorable terms as at any place we know of; railway facilities are at the doors of the timber, and a never-failing water-supply on hand. No better locality could be found for planing mills of every description; sash, window, door, and blind factories; balustrade, and carved wood-working plants; bric-a-brac, and pannelling shops. All of these could be made to pay well here, and furnish employment to many people. (3) And that they will be ushered in in time is true, from the fact that the favorable circumstances surrounding such plants in the region will eventually draw them here.

Before the West Virginia and Pittsburg Railroad penetrated this vast timber region there were no shipping facilities. Sombre and grand it stood lining the mountains from summit to base, the white blossoms of the dogwood mingling with the green of the myrtle, and the many varieties standing together waiting for the ingenuity of man to make use of its thousands of feet. In the Counties of Webster, Pocahontas, Braxton, Tucker, and Randolph, square miles of trees of primeval growth stand ready for use: throughout the forests along the line of the railroad are hundreds of acres of it, while in the interior the multitude of trees are countless. From this source alone, capitalists who are fast coming in will reap a rich harvest, for there are sufficient transportation facilities now. Nor is the immigration of capital for speculation the only result. In many sections the rough timber is being manufactured, and prepared for the market on the spot. Soon the clearing will begin in

(3) In the same article quoted from, prepared by Mr. Richards, he gives the following statement with reference to other plants:

"Beyond question the most inviting field for wood-bending factories is that reached by the West Virginia and Pittsburg Railroad. This is one of the most promising and successful industries of the age, and persons or corporations seeking locations for such factories should establish themselves where the raw material is abundant and cheap. The most desirable wood-bending timber is found along the West Virginia and Pittsburg Railroad, and the best location for factories utilizing that product is right along this line, where the timber can be hauled directly from the forest to the mill.

"Then after it has passed the mill, this system of railroad allied with the great B. and O.s' Lines offers unequalled facilities for placing the product in the best markets of the country."

The foregoing article is equally as wise as it is true.

good earnest, and there will be a culling of all this valuable material so essential to the wants of man. The hickory will have to bow its branches to the requisition of the carriage-maker; the walnut and cherry to the wants of the cabinet-maker, while the oak and pine must bow theirs for the much more common purposes of ordinary constructing and building material. Many manufacturing plants are now located along this line, and the West Virginia Central, and there is the brightest outlook for handle and stave factories, and cities and towns sufficient along the road to offer substantial advantages to those desiring to immigrate as wood-workers in any form or shape. No better field can be found for plants of this nature than along the line of the West Virginia and Pittsburg Railroad, in the region of which we are writing.

Owing to inaccessibility of material, there is a business that is constantly being narrowed within a smaller compass every day. We allude to the tan bark business. The continual demand for bark, and large consumption of the same, has occupied the attention of thoughtful men, as to where the future supply should come from. Mr. Richards has most aptly said, in his article already quoted from, as follows :

"The tan-bark supply is decreasing with such rapidity, that one can take a map of the United States, and quickly and readily indicate the locations yet not wholly taken up."

West Virginia, for more reasons than one, stands out in bright relief as one of the few locations where this commodity can be found in any quantity. High on the mountains around, and lining their sides, are numberless chesnut oaks, that will yield a large quantity of material in the way of bark. It is of a superior grade, peeling easily, and quite accessible. In this section of the State a large amount of tan bark timber lies ready to yield its product on demand. Already there are some large tanneries in the region along the West Virginia Central, and all have made a commercial success of the undertaking. Others are preparing to come in to vie with those established, in getting out and placing on the market the useful and valuable product made from bark. This country is nearer the West than the East, and to the former direction of the compass must tanners now look for raw and green hides, This line through Central West Virginia is in direct communication with Chicago, the trading mart and distributing point of the whole country now.

While in the virgin forests of this section the timber grows to an unusually large size, there are smaller varieties that are not useful for the hand saws, yet are valuable in another sense. This class of timber is now coming into demand from the institution of a business just in its infancy—the railroad tie business. Hitherto, the march after merchantable lumber, and the fine grade of timber here that bore transportation by wagon, even before railroads were constructed, has covered up the occupation of getting out railroad ties in this particular section. Now that transportation facilities have come, and immigration brought in, the vast tie-timber material is attracting attention. All along the line of the railroads thousands of ties can be seen coming in, and while the business is just beginning, it may be said to be on foot. The Gauley Lumber Company, at Camden-on-Gauley, in Webster County, is actively engaged in this business, and shipping a large number of ties. There are indications of an increase in the business everywhere, for farmers have found out that many a surplus dollar can be made by utilizing this timber, and hauling in the product to the railroad when the season does not permit work on the farm. Foreign capitalists are beginning to invest in the product in larger modes, until the outlook is decidedly bright. (4) This class of timber is always in demand, owing to a consumption of its product continually. Nearly all ties obtained in this region are shipped east, and a fair profit made on the capital and labor invested in the undertaking, provided the business is properly handled—a prerequisite in any calling or vocation in life. White oak is the principal kind of timber used, although other varieties are cut. This industry gives employment to many people, and deserves to be fostered and encouraged in every way. And the forests, by careful nursing, will yield a continuous

(4) Regarding this business, Mr. W. W. Thomas, a gentleman of practical knowledge upon the subject, has this to say:

“The tie business, that is just in its inception along the branches of the West Virginia and Pittsburg Railroad and West Virginia Central Railroad, is being developed rapidly. I was for some time engaged in the tie business along the section of country tributary to the Chesapeake and Ohio Railway Company, which was considered a fine timber region, but the forests in the section of country along the West Virginia and Pittsburg Railroad and West Virginia Central Railroad, are better than any I know of. This business is likely to increase, until there is an annual output of not less than four hundred thousand ties per annum, and there is a sufficiency of timber to last twenty years. In glancing at the various stations along the lines, it is easily seen that the number of ties hauled out is steadily increasing and the persons engaging in it show that its dimensions will soon reach a gigantic scale.”

supply, as the average durability of a good white oak tie is from twelve to fifteen years.

In the region of country all through Barbour, Randolph, Upshur, Lewis, Braxton, Webster, Pocohontas, Gilmer and Roane Counties, in connection with the timber interest, is another class of industries that would do handsomely. We allude to cutting and manufacturing hoop-poles. Innumerable white oak, hickory, and dogwood saplings line the hill sides and mountains, that if cut and bundled, would bring a handsome return from any of the stave and barrel factories. In the first place, the business requires but a small outlay of capital in the beginning, and all who have engaged in it along the older lines of the various railway systems have made money from it. Here, in this new region penetrated by the Camden Lines a few years ago, the material for this product lies in its native state—virtually untouched. The reason is, larger game, in the way of monster walnut, spruce and poplar logs, have occupied the attention of investors up to this time. But the hour is not far distant when manufacturers of hogsheads, barrels and kegs, must come here where the raw material lies, to obtain full advantages of the profits in this business, where the products both for staves and hoop-poles is in immense quantities. In a larger part of the interior district, the oak, hickory and dogwood, lie in their virgin state untouched.

Who can give an adequate idea of these immense forests by pen pictures? No one! Nature's paint, with the eye as a brush, dipped in the clear ethereal light around, can only give the proper coloring to the canvas on which we desire to impress some expression of the quantity of timber. On Williams' River, Cherry River, Cranberry, Cheat and Gauley Rivers, the boundless forests grow dense, and places exist where the sunlight struggles to kiss the daisies, and violets beneath the overhanging foliage, entwining with the scuppernong and fox grapes below. Looking from some high point over the surrounding country, in the mellow light of an autumnal sun, the eye reaches for miles over the variegated forest that sweeps away until sight merges into the realms, beyond which human sight can never peer. To give a clear view of the wealth of Central West Virginia in timber, it is necessary to mingle with the hawthorne, to see the myrtle, and watch the hemlock.

While upon this branch of the resources of West Virginia, it is not amiss to touch upon some of the gigantic lumber plants in

the region. Where any industries are instrumental in developing a section, and giving employment to a large number of people, it is entitled to more than a passing notice. At the proper place sufficient space will be given Camden-on-Gauley, Pickens, Buckhannon, Alexandria, and other points. At the present, we simply wish to give a list of the larger lumber plants, in order that an idea may be gained of the wonderful development already made of some of the timber interests in the section. Following are the leading ones: The Gauley Company, located at Camden-on-Gauley. Capacity of mill—100,000 feet per diem. The Alexandria Company, near Newlon's. Capacity of mill—80,000 feet per diem. Buckhannon Lumber Company, at Buckhannon, West Virginia. Capacity of mill—75,000 feet per diem. Pickens Lumber Company, at Pickens, West Virginia. Capacity of mill—50,000 feet per diem. The Holly Lumber Company, on Elk. in Braxton. Capacity of mill—90,000 feet per diem. Along the line of the West Virginia Central and Pittsburg Railroad, in Tucker and Randolph Counties, particularly, are some fine lumber plants that do a flourishing business. Among these, may be mentioned: Wilson's, at Wilsonia; Rumbarger & Co., at Dobbins; Dry Fork Plant, at Hendricks; Welch Bros., at Hughlins; Camden and Lane Boom and Lumber Company, at Bretz; Williams & Dasher, at Parsons. All of these plants have a capacity of from 50,000 to 100,000 feet of lumber per diem. Those plants represent an immense amount of capital, employing a number of laborers that runs into the thousands. Besides these, are a number of smaller plants at various points along the line of the road. (5) When these industries do a thriving business, while they have been in operation for a couple of years, and yet make no impression on the main body of the timber, we begin to realize that the resources of Central West Virginia are simply wonderly.

(5) The following statistics give an average of the product of some of the logs from the timber in this region:

1 log, 16 feet long by 60 inches,	3,156 feet.
1 " 16 " " " 61 " "	3,249 "

Mr. R. C. Clevenger, under a contract, obtained the following results:
From 59 logs was sawed 51,059 feet.

Mr. C. B. White, another sawmill man, under contract, gives these results:
From 221 logs, 139,481 feet.

Messrs. Daw & Burr, under contract, produced the following:
2,725 logs, 1,360,955 feet.

Mr. D. C. Flynn, at Camden-on-Gauley, connected with The Gauley Company, and a gentleman acquainted with the subject of timber, in sealing some logs, gives the handsome result of, 16,685 logs producing, 6,618,360 feet of good lumber. From accurate notes on this subject he gives the following carefully compiled measurement of logs:

33,905	Poplar	logs	measured	12,960,821
385	Cherry	"	"	108,247
226	Birch	"	"	37,548
18	Walnut	"	"	1,484
7	Magnolia	"	"	738
1,845	Ash	"	"	504,973
2,042	Maple	"	"	427,053
4,650	Chesnut	"	"	825,347
7,167	Oak	"	"	1,948,339
7,517	Hemlock	"	"	1,476,480
1,221	Cucumber	logs	"	258,286
1,370	Spruce	"	"	277,552
2,768	White Linden	logs	"	471,951



CHAPTER XII.

Geological Structure of this Section.—Carboniferous Age.—Arrangement of the Rocks.—Sub-carboniferous.—Carboniferous Sandstones.—Shales.—Conglomerates.—Limestones.—Coarse Sandstones.—Minerals Generally Deposited in these Rocks.

From causes generated when the great Appalachian upheaval occurred in this region, the rocks of the Upper Silurian period, as well as Devonian age, may be occasionally seen. (1) But the formations here belong properly to the Carboniferous age. The rocks divide naturally into those of the Sub-carboniferous and Carboniferous. In the former period may be found the Crinoidal limestone in the interior continental regions; and in the Appalachian range, in Middle and Southern Virginia, the rock is also of limestone, and has great thickness. When we come to Northern Virginia, or a large portion of the section of which we are writing, and Pennsylvania, the rock becomes a sandstone, or conglomerate, overlaid by a shaly, or clayey sandstone, and marlites of reddish, yellowish, and bluish colors. The whole has a maximum thickness of some 5,300 feet. In Harrison, Lewis, Randolph, and Barbour Counties these rocks are frequently exposed to view. In the Carboniferous period—the coal measures proper, are sandstones, shales, conglomerates, and occasionally limestones. But it must not be forgotten that these resemble those of the Devonian and Silurian ages very closely, and cannot be distinguished except by marks of upheaval, and fossils. They occur in various alterations, with an occasional bed of some mineral between them, principally iron and coal. By careful computation, it appears that the minerals take up possibly a fiftieth part of the whole thickness—that is for one foot of mineral there are probably fifty feet of barren rock. The strata of this period may be classified as follows:

(1) On the Gratton and Greenbriar Branch of the Baltimore and Ohio System, up Cove Run, in Barbour County, the limestone along the run holds fossils of the Devonian age. One of a fish was so plain, as to attract the attention of an ordinary beholder.

CARBONIFEROUS PERIOD.

1. Sandstone and conglomerate beds.
2. Coal-measure proper.
3. Shaley sandstone.
4. Siliceous iron ore.
5. Argillaceous sandstone.
6. Coal-measure, with clay below.
7. Sandstone.
8. Argillaceous iron ore.
9. Argillaceous shale.
10. Limestone, containing oolites.
11. Fossil iron ore, (oolitic).
12. Coal, small seam, with slaty shale.
13. Coarse sandstone (vespertine).

It will be seen from the foregoing that the limestone strata are more numerous and extensive in the interior, continental region than in the Appalachian, and west of the States of Missouri, and Kansas, limestone is the prevailing rock. And so in the Appalachian region of Middle and Southern Virginia. The sandstone and conglomerates, in a measure, form what is known as the capstone of the Carboniferous period, and in this section on the highest points is extremely persistent, rarely varying except where an upheaval has penetrated them, or they are depressed in folds by other strata, and somewhat covered over. When the rocks are exposed to the chemical action of the atmosphere, the sandstone appears to be freer from impurities, being in many places a granular quartz, composed of almost pure silica. The coal beds below, ranging from four to nine feet in thickness, often rest on a bed of grayish-blue clay, called the under clay, in which roots and stems of plants are often found. When this clay is absent, the understructure is usually a sandstone or shale,—more frequently the latter. Above, the rock may be sandstone, shale, or even limestone. Frequently it is a shale, commonly termed slate. These coal beds vary in thickness in this region. Below the shaly sandstone under the coal, and often just beneath the shale, a silicious iron ore is found, ranging from one and a half feet in thickness to two and a half. This seam is very certain and persistent, sometimes running for miles unbroken, except where the flowing of water has caused erosion, or an upheaval produced a fold. When we come to speak of the minerals *seriatim*, under the head

of mineral resources, this stratum will be carefully treated. Below the Argillaceous sandstone, in many places, another seam of coal is perceptible, that is not so thick as that of the coal measure proper above. Beneath the second layer of coal lies a sandstone, some nine or ten feet in thickness, underlaid with a slight vein of iron ore, that cleaves in a shell-like way to the rock. This ore is but slight, rarely running over twelve inches in thickness. Beneath the succeeding Argillaceous shales and oolitic Crinoidal limestone, lies the thickest and most persistent bed of iron ore in this region. It is a fossil ore, in the shape of oolites, and lies imbedded in the shales, clays and sand-grit of the earth. It ranges from three to four feet in thickness, and is quite prolific. The remaining strata of this period consist mainly of a slight seam of coal and a coarse sandstone, known, geologically, as the Vespertine series. This field of the geological column is an interesting study, from the fact, the great upheaval that formed the Appalachian range, with the faults and ridges produced by erosion, present some fine views to the student, as well as ordinary observer.

Leaving aside the barren sandstones, all these strata contain minerals. Most of these come under the class of earthly minerals, and are prolific. In the upper sandstone and conglomerates, a rock is frequently seen, composed almost entirely of pure silica, that yields a good product for glass-sand. Just beneath the first bed of coal, in a fine grained, dark blue stone, drawing slate is found. In the strata, under the coals or second bed, a shale is found, that makes fine fire clays. The limestone stratum produces oolitic balls, containing more or less iron ore, known as blue, lump ore, that has been used as material for producing pig in the old charcoal furnaces in this section. Mixed with the fossil shale ore, we have adverted to, a good product is obtained. All through the sandstones in the Carboniferous period, beds of Argillaceous iron ore can be found, which accounts for the fact, that iron furnaces are often placed in coal regions. Besides the minerals enumerated, in some places, a large quantity of the sulphate of lime exists that produces a fairly good article of gypsum. In addition to the mineral coal, the rocks often afford bituminous liquids, ordinarily called petroleum oil, which when purified means kerosene. Oil wells are dug quite extensively on the line of the Baltimore and Ohio Railroad, through this section, and on the Ohio River Railroad, near the Panhandle. But in some of these places, the oil undoubtedly comes

from the Sub-carboniferous rocks, while it is not impossible for it to come from the Devonian, and Upper Silurian periods. Petroleum is the result of vegetable decomposition, and may proceed from the rocks of various ages—from those of the Lower Silurian to those of the Tertiary period. Whether or not the Sub-carboniferous rocks that usually yield salt, or salines, are prolific with that product in the whole section is still undetermined; but in a portion of it, along the Ohio River, salt has been obtained in paying quantities from the clayey beds, or marlites, shale, and magnesium limestones of the Sub-carboniferous rocks.

The rocks of this period give us a good idea of the original formation of this section of West Virginia. The different coal beds show that at times the sea overflowed the region. The marshes filled with their rank vegetation, and the shallow lakes of the coal era, continued growing for a long period, their growth dropping its leaves annually with its decayed stems, and branches, until an immense bed of vegetable matter was formed, probably many feet in thickness for one of bituminous coal. (2) The bed of decayed vegetation thus prepared over the wet areas of the continent commenced to undergo beneath, that slow decomposition that is the final result of the deposit in the earth, known as coal. But these coal beds alternate with sandstones, shales, conglomerates, and limestones. This fact shows that the long period of verdure, necessary to form the bed of vegetable matter for the coal, was followed by another of overflowing waters, which fossils prove to be of an oceanic nature, which carried sands, pebbles, or earth over the old marsh, till scores of feet in depth of these deposits had been created over the vegetable debris, where the process for decomposition necessary to make coal went on to its completion. It was essential for the vegetable matter to have the lifeless influence of burial, as well as water, to favor the conditions that are necessary for the production of coal. (3) In the upheaval that took place, which formed the Appalachian range, these formations made by the action of waters between the coal beds, became the receptacle of the minerals we have named, giving this section of West Vir-

(2) For eight feet of vegetable formation, Mr. Dana, in his geological work, gives one of coal. So, for the formation of the Pittsburg seam, sixty feet of vegetable deposit would be required.

ginia, in the Alleghany Mountains, a veritable field of mineral deposits. We will now confine ourselves to the discussion of the various classes of minerals, under the head of mineral resources of West Virginia.

(3) Concomitant with the mineral production in a liquid shape, known as Petroleum, in the oil region of this section, wells of Natural Gas have been found, that are apparently inexhaustible. The gas comes from the carboniferous beds, in the Devonian age mainly, although the Sub-carboniferous rocks may furnish some.



CHAPTER XIII.

Mineral Resources of Central West Virginia.—Coal.—Description of the Territory.—Division of Same into Fields According to measures.—Pittsburg Seam of the Upper Series. The Ohio River Field.—The Fairmount Field.—The Jackson Field. The Clarksburg Field.—The Monglomerate Measures.—Upshur, Braxton, Webster, and Nicholas.—The Upper and Lower Freeport.—The Upper, Middle, and Lower Kittanning.—The Clarion Beds.—Camden-on-Gauley Field, with Gauley and Elk.—West Virginia Central and Pittsburg Fields.

In the early ages of the Carboniferous period, when the deposit of vegetable matter was proceeding, the positions of the great coal areas of North America were the locations of the large marshes, and shallow fresh water lakes of the period. But it is not to be presumed that the marshes alone were covered with verdure, for in all probability vegetation spread over the entire surface. But the thick deposits where there were marshes under the jungles, and the shallow lakes with their floating islands were the regions most conducive to the reception of the rank vegetation which afterwards produced the coal. The State of West Virginia must have been happily situated for the making of coal, since we find within her borders one-thirteenth of all the coal in the United States. And this computation is only based on surface measure without reference to thickness. After a liberal deduction from erosion, and excluding seams that dip under the valleys, the State possesses some 16,500 square miles of coal territory. (1) It exceeds Pennsylvania by

(1) West Virginia comes among the first States in the Union in quantity of coal. The following comparison gives its status in that respect :

Illinois.....	total area,	30,000	square	miles.
Iowa.....	" "	21,000	" "	" "
Missouri ..	" "	21,000	" "	" "
West Virginia....	" "	16,500	" "	" "

1,000 square miles, and comes next to Illinois, Iowa, and Missouri. The reason the State, that in territory is much smaller than many others, exceeds her sisters so far in this valuable commodity, results in a great measure from the geographical lay of the mineral. The Appalachian field of coal, acknowledged by many as the most valuable one known, covers an area of 60,000 square miles, and is like the shape of a boat with its widest dimensions in the centre. The section of West Virginia, bearing coal begins on the northern lines of the State, with its coal territory gradually broadening as it runs south, until the widest part of the coal area is reached in that part known as the Flat Top Field where the veins are thicker than in any other part of the Appalachian Field.

In tracing the outcroppings of the coal of the section of which we are writing, we find that they are extremely persistent. The great Pittsburg seam, ranging from seven to eleven feet in thickness, which has been the foundation of Pittsburg's great growth, as well as Wheeling's rise, pursues its way onward south through the region we have in hand. Along the banks of the Potomac, the Monongahela, Tygart's Valley River, the West Fork, we find that rich seam lying above water level. This seam, as well as other measures, are a continuation of the fields in Pennsylvania. The Pittsburg layer, the lowest of the upper productive measures, is found in the northern and central part of the State, the middle coal measures in the Kanawha Valley, and the lower coal measure in the Flat Top region. Scarcely a State in the Union is so favored in the extent and diversity of its coal product as West Virginia. Her coals embrace all grades of bituminous; steam, coking, domestic, and gas coals of the best type. The product of the Fairmont and Monongah regions have a coal of unusually fine qualities for both steaming and coking purposes. The New River region is known the country over, as producing a fine grade of coke. The extent of the coal measures present a quantity of mineral that is sufficient to place the State among the first in the Union in wealth. Already, the output of the product of the mines has given West Virginia an enviable reputation among her sister States. The Pittsburg seam is generally above water level. The seam appears to make a semi circle, so far as some of the counties on the Ohio are concerned. Leaving the river just below Moundsville, it curves in towards the interior, excluding Wetzel, Tyler, Doddridge, Ritchie,

Pleasants, Wirt, Wood, Jackson, Calhoun and Roane Counties, coming to view again on the upper edge of Mason County, where the large seam of Pomeroy coal first makes its appearance. But in this arc or circle bordering the Ohio River, other seams are found. (2) This seam in the interior, follows the Gauley, the Elk, and their tributaries, until it touches the Kanawha region. (3) Resuming its positions east of Kanawha River, it passes over the New River seams of coking coals, and runs southwest to the Big Sandy Field, where it reaches its

(2) In the report of the late Prof. R. C. Taylor, taken principally from Prof. Rodgers' work, we find the various seams classified as follows in this section of West Virginia:

First or main seam from.....	5 to 9	feet.
Second	3½	"
Third	5½	"
Fourth	7	"
Total.....	25	feet.

From a careful examination there can be no doubt of the correctness of this estimate.

(3) In the report made by the United States Government Survey for 1891, the "Stratigraphy of the Bituminous Coal Field of Pennsylvania, Ohio, and West Virginia," is treated by Israel C. White. In the treatment of this subject the report on page 70, in speaking of what Mr. Rogers had written on the subject of the "Barren Measures," says:

"I have adopted the name Elk River series, as a geographical designation for these beds, since they are finely exposed along that stream between its mouth at Charleston, West Virginia, and Braxton Court House, or Sutton, nearly one hundred miles above. * * * * * The coal beds of this series are, with one or two exceptions, noted for their variableness and uncertainty."

If in the treatment of this subject, the report has followed Prof. Rogers' closely as to this Elk region, then the latter is as misleading as the former. We would not care on our own opinion to differ with, or dissent from a geological survey, unless facts warranted it. In that case duty to the section demands it. Part of these very measures, characterized by Prof. White as barren, and lying along Elk, have the finest coal in them. Mr. Harris S-Daddow, than whom a better geologist and mining engineer cannot be found, in a report made not for any governmental survey, but for the purposes of knowledge, writes:

"Coal River, Elk River, and Gauley diverge from the Great Kanawha, and spread their branches over one of the richest and most magnificent coal regions in the world, and bring down their wealth to one common centre on the Great Kanawha; or, such might, and may be the result under future developments."

Added to authority such as that, practical tests in the way of openings to which we now allude, show the correctness of Daddow's position. In a section of the measures known as "Barren," or the "Elk series," as named in the report of the Government Survey, several openings show some splendid seams of coal, and are greater in thickness than the New River series by actual measurement. The interruption of the seams by upheaval in the "Elk series," did not destroy them, nor yet render the section so wanting in coal, as to be characterized "barren." Some fine coal lies just as stated by Mr. Daddow.

final end, vanishing over Kentucky's hills. The seam of the coal here is of the same measure as that of the Fairmount, Monongah, and Clarksburg regions. For a more lucid account, we will divide this territory into fields, giving names to designate them. A *seriatim* discussion of these fields with analysis, will give an idea of the coal. (4)

THE OHIO RIVER FIELD.

Wood, Jackson, and Mason, compose the territory of this section, along the Ohio River. While the Alleghany Mountains proper, with their spurs and sub-spurs, descend into hills and ridges when the Ohio is nearly reached, they still contain some deposits of coal. As the Ohio River was the principal mode of transportation for these counties before the construction of railroads, this section was probably the first opened up in the way of mining coal. From Pittsburg southward, the coal extends down the Ohio River, by Wheeling, and thence through Ohio and Marshall. Here, the best groups of coal appear to make a semi-circle away from the Ohio River, excluding Wood, Jackson, and a part of Mason from the thicker seams, which come to the Ohio River again at the upper edge of Mason, where the large Pomeroy seam makes its appearance. (5) The Ohio River Railroad has two branches—one leaving the Main Line, running through the northern part of Jackson County to Spencer in Roane County; another, through the southern part of the same county, going as far as Ripley, the county seat of Jackson. Both of these adjuncts bring out coal from the interior. In Mason County, the sections of country around Clifton, and thence southward, are embraced in the seams running north from the Kanawha region. The quality of this coal

(4) We are aware of the fact that the area of coal territory in West Virginia is estimated at between fifteen and sixteen thousand square miles. But after a careful research we feel safe in putting it at sixteen thousand five hundred miles. We are not alone in our figures. The most satisfactory report ever made specifically on the subject of West Virginia's coal area, was written by Prof. Harris S. Daddow, a geologist and mining engineer from Pennsylvania. He writes:

"West Virginia contains a larger portion of the Alleghany coal field than any of the States. Over *sixteen thousand* square miles of this great coal field lie in Western and Eastern Virginia. Of this area, however, only a few miles exist in Old Virginia, on the eastern edge of the field in the southwest—perhaps less than one hundred and fifty square miles of available coal. But the best and most available portion of the Alleghany coal-field lies in West Virginia, and the greater portion of its vast area, is naturally opened to development by the numerous streams which traverse its face from east to west."

compares favorably with that of the rest of the section, and is of a bituminous nature, good for steaming, and domestic purposes. (6) It does not run sufficiently high in fixed carbon for the production of coke. In the semi circle we have named, from which the thickest veins are excluded, the seams range from eighteen inches to four-and-a-half feet in Wood and Jackson Counties until the fine seam of Pomeroy coal is touched at the upper edge of Mason

FAIRMOUNT FIELD.

This section includes what is now known too, as the "Monongah Field." It is without any doubt, one of the finest coal fields in the State of West Virginia. This field includes, properly speaking, all of Marion County, and the northern portion of Harrison, until the Clarksburg Fields, on the east of the Monongahela, and the Jackson Field on the west are reached just north of Lumberport. The reputation of the gas coals from this field is quite extensive, and throughout the region the large Pittsburg seam, the most reliable, and persistent of the whole group, can be seen outcropping above water-level on the sides of all the hills. Practical demonstration, as well as analytical tests, grade the coal in this field with that of the Flat Top region. Prof. Rogers regarded this deposit, identical with the Pittsburg seam, tracing it as far south as Clarksburg, and pronounced it one of the richest deposits in the State. One of the main seams measures from ten to twelve feet in thickness, while the average thickness is eight feet. Below the thicker seams, with a strata of sandstone intervening, is found a thinner layer of coal, that is highly bituminous. Around Fairmount, Monongah, and other places, extensive mining operations have been entered into, and large shipments are sent East, yet scarcely an impression has been made on the main body of the

(5) The Ohio River Railroad carried over its line, for the year ending June 30, 1893, 70,361 tons of coal. The greater part is shipped by water transportation.

(6) An average test of this coal, analytically, shows it is sufficient in fixed carbon for both steaming, and domestic purposes. From average samples taken from the section, we have the following results:

Fixed carbon.....	46.30
Volatile matter.....	43.29
Water.....	1.20
Ash.....	9.30

This analysis was made by C. E. Dwight, and is correct.

coal. These valuable seams may be traced northward into the region towards Pittsburg, and as far south as Mt. Clare in Harrison County. All along the Monongahela River Railroad, and on the hills bordering the river of the same name, this larger Pittsburg seam with other groups of coal crop out, enabling a person to put out his hand and touch them. The quality of the coal in this field has been proven far superior than was first thought. When the product was taken out in the beginning, an opinion prevailed that it was not sufficiently high in fixed carbon to produce coke. This idea arose from the fact some analysis made, put the fixed carbon much lower than it should have been. (7) Instead of running 53.48 in fixed carbon as once determined, it should have been, 60.54. On a fair practical test, the coal produced a fine coke, throwing this field first in rank in West Virginia as an all-around coal for coking, domestic, steaming and gas purposes. Many mines are in operation in this field from which a large product is drawn around Fairmount by the Baltimore and Ohio Railroad Company, and by the Monongahela River Railroad Company at Monongah and other points. A large quantity of this coal goes to Eastern cities for gas purposes, and gives satisfaction.

THE JACKSON COAL FIELD,

Proceeding south by way of the Monongahela River, some miles above the Fairmount and Monongah Fields, the stream

(7) The first analysis made of these coals, from samples taken from Monongah, gave the following results :

Fixed carbon.....	53.48
Vol. matter.....	36.92
Water.....	1.42
Sulphur.. .. .	0.71
Ash.....	4.51

This analysis was made by Mr. Andrew S. McCreath. He made this as an analysis to compare with that of the Flat Top Field along the Norfolk and Western Railroad, which corporation engaged him to make a report for their fields. We do not for an instant mean to assert that the position occupied by him, influenced him in the least, but a subsequent analysis carefully prepared, shows this to have been a mistake. Following are the proper results from this coal :

Carbon.....	60.55
Volatile matter.....	37.34
Ash.....	2.14

In this reduction both water and sulphur are included in the impurities under the head of volatile matter.

divides two magnificent coal fields extending for miles on the river. The country on the west side of the Monongahela, is called the Jackson Field. (8) For many reasons this is probably one of the most valuable deposit of the celebrated Pittsburg seam. Bordering the Monongahela River for miles, the field stretches westward some fifteen miles, over a rolling country, abounding with beautiful ridges and succulent valleys. In addition to having this fine seam of coal through the whole field, nature seems to have smiled upon the section with a natural drainage of creeks and brooks for easy and cheap mining, as well as beauty of scenery. The whole field is drained by Big Stone Creek, Little Stone, Jones' Run, Nolan's Run, and Robinson's Run with their tributaries. The valleys and ridges made by these water courses, give the great Pittsburg seam, opportunities for outcropping that are simply superb. The outcrops of the seam of coal, ranging every where from seven to nine feet in thickness, can be seen all along the ridges, sufficiently high to be free from water, yet low enough to be mined by means of a side entry, or tunnel, and tippie over the car. While the field has never been mined, and the thousands of acres of coal lie in their virgin state, entries have been made in the seam along all the ridges that give a good view of the deposit of the mineral. From openings made in this field, on opposite sides of the hills, it is perfectly apparent that the seam is persistent through the whole field. The fine agricultural country running over the surface, gives an inviting aspect to the view. The seam runs horizontally through the ground without anticlinal ridges, or synclinal troughs, with a solid average thickness of eight feet. In all its native wealth, it lies untouched, and to the first one developing it, must come the wealth of a large return. In

(8) This field takes its name from Mr. T. Moor Jackson, of Clarksburg, West Virginia. In the development of his native State he has done much for her success, while bettering his own condition. He comes of the old Jackson family, among the earliest settlers here. His grandfather, Judge Jackson, was a distinguished citizen, occupying a high official position, and a friend of Jefferson, Adams, Madison, Calhoun, and others. T. Moore Jackson's grandfather on his maternal side was Return Jonathan Meigs, Governor of Ohio, and after whom Meigs County was named. Mr. Jackson was at one time Professor of Civil Engineering at the University of West Virginia in Morgantown. Subsequently he located the line of the Pennsylvania Railroad that was to extend in this section. He is not only a person of energy in pushing the resources of his State to the front, but the best *practical* geologist within her borders. His profession of engineering, coupled with a knowledge of geology, has given him a ripened judgment on the resources of West Virginia.

formation, it resembles more clearly the lower measures of the Flat Top Field, than any we know of, except that of Senator Camden's just opposite this, on the east side of the river. The quality is unusually good. It is of the same grade as the Fairmount region, being part of the identical seam, except it will average more in thickness at this point, and is a shade higher in carbon. (9) This coal on an assay, presented a degree of lowness in sulphur and ash, almost incredible when compared with the regions around, but renewed reductions confirmed the first figures as to its purity in that respect. The only accountable reason for this state of affairs is the marked absence of pyrites of iron, and the further fact that when the vegetable matter forming the deposit was made, it must have been peculiarly free at this point from all impurities, that generate sulphur and ash. The propinquity of this field to the railroad and the village of Lumberport; the fact it is in a virgin state, render it one of the most valuable fields for future development that we know of.

CLARKSBURG FIELD.

Along the east bank of the Monongahela River, opposite the town of Lumberport, and some nine miles north of Clarksburg, lies another fine coal field, comprising the immense area of Senator Camden's lands, running for miles along his road, and the coal fields in the vicinity of Clarksburg. This region is properly known as the Clarksburg Field. It is but a continuation of the main Pittsburg seam, ranging from seven to nine feet in thickness. The Monongahela River Railroad, running along the banks of the river of the same name, exhibits the seam where ever a cut has been made. It is persistent, uniform, and thick, showing the immense deposits that lay imbedded in the hills, and mountains nearby. A great deal of this coal field has been opened up, especially around Clarksburg, and a number of ovens constructed for the purposes of burning coke. This coal is found in all the hills and ridges throughout the field, and is a

(9) A carefully prepared analysis of samples taken from Jones' Run, Robinson's Run, and Prospect Valley, gives this result :

Fixed carbon.....	61.40
Volatile matter.....	35.57
Water.....	0.37
Sulphur	1.51
Ash.	1.21

continuation of the Fairmount, and Monongah coal territory, and the Pittsburg seam, in all its thickness. In quality, it is good, making a fine product for steaming, domestic, and coking purposes. (10) This field near that of the Jackson territory, runs low in sulphur and ash, yet, from a sample taken directly in the vicinity of Clarksburg, the ash ran up as high as 1.58. Shipments are being made from this field East, and the coals bear a high reputation for both steaming and gas purposes. So much for the continuation of the Pittsburg seam north of Clarksburg. Ascending the West Fork River, south of Clarksburg some eight or nine miles, we have another strong outcrop of this persistent seam, in the section of country near Mt. Clare Station, on the West Virginia and Pittsburg Railroad. And it is not until we reach this section of Central West Virginia, that the Pittsburg seam shows signs of leaving its solid thickness, that it has horizontally maintained since it crossed the northern borders of the State. While this coal shows well near Mt. Clare, and presents some superior points in quality, we have the anti-clinal ridges and synclinal troughs in the seam of coal. These appearances are not noticed north of Clarksburg, except slightly, and disappear altogether before reaching Lumberport, nine miles north of Clarksburg. At Mt. Clare the coal, while laying in folds, is quite persistent, and extends into the ridges east and west, the stratum running in synclinal troughs northwest and southeast, the folds running almost southeast and northwest. These folds, as far back as one thousand feet underground, show a thickness of solid coal from eight to nine feet in thickness. The troughs show a thickness from three to five feet. The coal is mined with unusually little cost, because but little blasting is required. The seam is cut under and the block above brought down with a great deal of ease. The coal is of a bituminous nature.

Various degrees of thickness are found in the solid coal in the folds between the troughs. At one point it was nine feet three inches, at another eight feet seven inches, at another

(10) From samples taken from the main seam, we have the following analytical results:

Fixed carbon.....	58.00
Volatile matter.....	38.00
Water.....	1.50
Sulphur.....	1.50
Ash.....	0.20

seven feet three inches, and from an underground examination it appears that the quantity is large. It is impossible to calculate the quantity in the measure of this coal; but the stratum extends along the northeastern base for many miles. It is not impossible for the coal measures to run out in this stratum, into slates and clay; but from the angle of dip of some of the southwestern measures, we feel satisfied there are breaks in the coal measure proper. It is contended by some, that the dip is no instance of the measure running out, but evidence of the fact that the measure runs far below the surface, going many hundred feet under breaks and faults (known as valleys) and appearing in a hill beyond. But in this section, whenever there is a fault or valley, there is not only a break in the coal measure proper, but in the stratum itself, for on the base of these hills the measure runs out to be picked up on the coal stratum on the next hill.

And proceeding southward into Lewis, Upshur, and Braxton Counties the measure becomes less and less, in point of thickness. The reader should not infer from this discussion that those counties named are not well supplied with coal. They have seams of coal, but after leaving Mt. Clare, the seam continues to become thinner. But the coal at this point is very superior in quality. It seems to be an ascertained fact, that the smaller seams, are at times much better in quality. This is apparent from the New River region where they are rarely over four feet in thickness. This seam may be seen cropping out farther south through Lewis County, until Braxton, Upshur, Webster, and Randolph are reached, when we have another series of coal with which to deal. Through Randolph, Webster, and Nicholas Counties, the conglomerate rocks contain a workable seam of fairly good coking coal, that lies in the lower portion of the series. This coal may be seen around Camden-on-Gauley in Webster, and increases in thickness as it runs southward through Webster and Nicholas Counties.

COVE RUN FIELD.

But probably among the most important measures of coal in West Virginia, may be classed the Upper, and Lower Freeports, Upper Kittanning, Middle, and Lower Kittanning, and Clarion coal beds. Entering West Virginia from Pennsylvania, on the northern edge of the State, the Upper Freeport, and

Lower Kittanning, classed locally as the "Austin" coking coal, and the "Newburg shaft," crop out as they go southward through Taylor, Barbour, Randolph, Braxton, Webster, Nicholas, and Clay Counties. In the eastern portion of the Appalachian range, these coals come to the surface, while on the western range they appear along the uplift known as "volcano," in Wirt and Wood Counties. Among the most valuable of these seams, is that lying in Barbour County, West Virginia, near Cove Run, on the Grafton and Greenbriar Division of the Baltimore and Ohio Railroad. Throughout this region this Freeport measure makes a fine showing, cropping out on most of the hills and ridges between Cove Run and what is known as the old "Vallëy Furnace." In both Taylor and Barbour Counties this seam is quite persistent, and exists in many places in fair working quantities. Near Cove Run, already named, the coal shows up finely, and runs almost in a horizontal manner through the ridges, ranging from four to seven feet in thickness. The openings made show that this measure extends throughout all the ranges of ridges in this tract of land and the quantity is immense. Throughout this area of country, which is composed largely of ridges, with small faults, a solid layer of this highly bituminous coal is deposited, that can be seen, and to a certain extent calculated in quantity, from the openings made. This coal is as pure and available for all the requirements of trade and manufacture as any in this country and has no superior as a domestic, steaming and coking coal. The lay of the measure is such as to render mining both cheap and expeditious, while it is located above water level, giving the floors of the mines almost perfect dryness. The coal is gotten out by means of tunneling into the side of the hill, with location for tipples almost directly at the drift-mouth. Coal has been taken from this measure, and a fair estimate of mining and loading may be said to cost thirty-five cents per ton. From an analysis, they possess sufficient fixed carbon for coking purposes. (11) In addition to the

(11) Prof. Rodgers in his report on the coal in this section gives the following analysis, that is correct as to the average:

Fixed carbon.....	56.74
Volatile matter.....	41.66
Ashes.....	1.60

Immediately on Tygart's Valley River, near Cove Run, the coal runs higher in fixed carbon.

bituminous coal, Barbour County has cannel coal, that has been tested and proven superior. This measure extends also into Randolph, as we have seen, although the seams are by no means so thick. In this same series the Pickens Field is located, that is at present the terminus of the Southeastern Branch of the West Virginia and Pittsburg Railroad. In this section a good grade of cannel coal has been found, and is said to be in quantities sufficient for working purposes.

CAMDEN-ON-GAULEY FIELD,

with tributaries of Elk, and Gauley River, present some good coal territory even if a portion of the section does come within the region known as the "barren measures." And though the "barren measures" have been located in the region bordering on the Elk, nowhere in the State is the wealth of coal so conspicuously exposed as on the banks and bluffs of this stream. In the neighborhood of Sutton, in Braxton County, ninety miles from its mouth the banks are only ten or fifteen feet high, yet, on reaching the line of Clay County, they range from three hundred to three hundred and fifty feet in height. In these ravines coal seams lay bare for miles in extent. Just below the mouth of Birch, on Duck, Tate, and O'Brien Creeks, the best of two or three workable seams of good splint coal is eight feet. Cannel coal is here too, splitting the bituminous vein in two, then giving out to reappear down in the same peculiar form. Near Clay Court House, and for fifteen miles below, seams ranging from five to eight feet can be found, that are good coal. An unusually large vein of cannel coal is opened at Queen's Shoal, below Clay Court House. This entire region is one of great wealth, so far as coal is concerned. In Webster County, on the Gauley River, near Camden-on-Gauley, seams of bituminous coal range, that run from three and a-half to five feet in thickness, and these increase as we proceed southward. The coals in this immediate section do not range as high as the others we have named, in fixed carbon, yet they make good steaming and domestic coals, and will do for a medium grade of coke.

FIELDS ALONG WEST VIRGINIA CENTRAL AND PITTSBURG R. R.

Through the section of Central West Virginia, that runs through the western part of the Alleghany Mountains lie the

coal fields along the West Virginia Central and Pittsburg Railroad that are among the most profitable, and prolific in the State. As a domestic, steaming, and coking coal, the product of this field has no superior anywhere, for the "Cumberland coals," now possess a national reputation everywhere. The fields throughout this district, are popularly known as the Cumberland and Piedmont, Upper Potomac, Elk Garden, and Roaring Creek. At Elk Garden, the famous Davis mines are situated that yield a large output. This coal is peculiar in the way it lies geologically. In the great upheaval that occurred ages ago, the coal seams were uplifted with the remaining strata, and in the Elk Garden Field lies almost on the top of the Alleghanies. The seams range from seven to ten feet of solid coal, and lie in immense quantities. (12) Many mines have been opened, and are profitably worked. Descending the Alleghany Mountains on the southern side, from Elk Garden regions, we pass into the coal fields beyond Elkins, bordering Tygart's Valley River, between the latter town and Belington. Here the fields are possessed of immense quantities. On a small stream known as Roaring Creek, running westward for miles, is an oval

(12) From the following statement, it will be seen that the shipments of coal are large. Yet the quantity is undiminished, and the vast deposit along Roaring Creek, near Tygart's Valley River, is virtually untouched:

Statement of Coal Shipments from Mines on line of road and on Cumberland and Pennsylvania Railway during the Six Months ended June 30, 1892.

From Elk Garden Mine.....	183,715	
Davis and Elkins Mine.....	32,360	
Atlantie Mine.....	25,361	
Virginia Mine.....		
Hampshire Mine.....	4,238	
Switch-back Mine.....	20,410	
Big Vein Mine.....	1,812	
Total from Elk Garden Region.....		267,892 tons.
From Spring Garden Mine.....		
Fairfax Mine.....	355	
Bayard Mine.....	257	
Thomas Mine.....	43,120	
Davis Mine.....	56,572	
Douglas Mine.....	31,577	
Total from Upper Potomac Region.....		131,881 tons.
From Junior Coal Co's Mine (Belington Extension).....		363
Total from W. Va. Central and Pittsburg Ry.		400,136 tons.
From Merrill Mine, Piedmont and Cumberland Ry.....		
Maryland Union Coal Co., C. & P. Ry.....	4,038	
Piedmont Cumberland Coal Co., C. & P. Ry.....	4869	
Total from Cumberland & Pennsylvania Ry....		8907
Total Gross Tons from all Mines.....		409,043 tons.

basin composed of vales, and graded ridges. The deposits at this particular point are prolific in the extreme. Two distinct seams of bituminous coal lay throughout the section. The lower one is some nine feet thick of bituminous coal, running low in sulphur and ash. Above this lower seam some one hundred and fifty feet, is a second, ranging from four to five feet in thickness. A branch road is now being constructed up Roaring Creek, and as yet this field is untouched. One or two mines have been opened, that show the coal in its native state, giving one an idea of its thickness, and the large deposit. (13) This whole trend of coal, along the West Virginia Central and Pittsburg Railroad is a part of the celebrated coal fields running from the north, through Pennsylvania, and through the sixteen thousand square miles of coal territory in West Virginia. The whole field is one of the richest, and most valuable in West Virginia. Practical use has demonstrated the superior quality of the field for all purposes.

(13) The geological structure around Roaring Creek, shows that in the ages when the vegetable deposit was being made that formed this coal, this immediate section was a jungle of great depth. Through oceanic action, the rocks between the upper and lower seams were formed. During the vegetable period of the first formation, much more time elapsed than during the second. That accounts for the difference in thickness of the two seams.



CHAPTER XIV.

*Mineral Resources of West Virginia Continued.—Petroleum.—
Oil Wells of this Region.—Sistersville. Eureka-Belmont.—
Marion County Oil Field.—Production at the Present Time.
Natural Gas.—Salt Region in this Section.*

What is the origin of petroleum, commonly known as kerosene oil in its refined state? More than one person has asked this question, and hundreds have tried to answer it satisfactorily. Among the latter may be named Berthelot, the French chemist, and Doctor Mendeléjeff, a renowned mineralogist of St. Petersburg. Both agree that the substance is produced by the action of chemical force on inorganic matter, and enter gravely into the discussion of the existence of the alkali metals, potassium and sodium in the interior of the earth in a free, or uncombined state, and at high temperature. If surface water carrying carbonic acid in solution should find access to these metals in these conditions, chemical reactions could easily take place, by which certain of the hydro-carbons would be generated. But neither seem perfectly clear how the process goes on that makes petroleum, so we turn to the geologists, and Mr. Dana, chief among them, informs us that: "Petroleum is a result of the decomposition of vegetable substances." He, too, is silent as to *how!* It proceeds from rocks of various ages, from those of the Lower Silurian period, to those of the Tertiary age. "The earliest springs affording a large supply of oil come from the Corniferous beds (Devonian), as at Enniskillen in Canada." (1)

But whatever may be the doubts as to how petroleum originated, there is one subject on which there is no doubt. This section of West Virginia has petroleum. And the quantity discovered in the three principal fields: Sistersville, Eureka-Belmont, and Marion County, has brought in that national syndicate, the Standard Oil Company to work out its product, giving this State the reputation of being one of the best oil

1) Dana's Mineralogy. Page 24.

fields in the country. From statistics we will show later on, a large quantity is now pumped out, and shipped both by rail and pipe to the various refineries, and distributing tanks, where it is barreled and sold. During the late civil war, when the sulphurous smoke of undue excitement subsided, the only profitable wells were found to range in what is known as the volcano uplift, a narrow strip of country running through the Counties of Wirt, Ritchie, Wood, and Pleasants, embracing the localities that have since become famous under the names of Oil Rock, Standing Stone, California, Laural Fork, Oil Spring Run, Gale's Fork, Horseneck, and Rawson's Run. The theory that the oil might be found in West Virginia, as well as Pennsylvania was tested, and after many losses in investigations, with some fortunes made, the three fields which we have named were discovered and put in operation, that have given West Virginia a justly celebrated reputation for oil. Up to the year 1889, the oil magnates paid no serious attention to West Virginia on this subject, but during that period, almost a bright revolution took place in oil history, This marked the opening of Dall's Run, Mannington, and Eureka. These discoveries caused the Standard Oil Company to recognize that the Mountain State would in the future be the centre of oil operations for that company. This company has purchased, and leased hundreds of thousands of acres of oil territory to await their future developments. The Sistersville Field has come into prominence, so West Virginia stands to-day among the oil-producing States of the Union.

The territory of the oil fields in West Virginia may be said to be divided into four districts known as the Turkey Foot district in Hancock County, a continuation of the Pennsylvania oil fields; the Mt. Morriss district, including the Wells of Monongalia, and Marion County; the Volcano and Eureka districts in Ritchie and Wood Counties, as well as Pleasants, and the old Burning Springs district in Wirt County. In the Turkey Foot, Mt. Morriss, and Burning Springs districts, the entire production is classed as illuminating oil, while of the Volcano and Eureka districts, the greater part is illuminating, and the rest lubricating. The question has often been asked, can oil be found in other parts of the State aside from the districts we have named? This is a difficult question to answer without practical test. But as this oil region possesses a strata peculiarly its own, with its vertical rocks and uplifted surface,

we naturally conclude such a position geologically is happily situated for the production of the crude stuff. Still, it is not impossible for it to exist elsewhere, as it is found in this region in the carboniferous rocks, for in most of the producing wells of Volcano, and Burning Springs districts the oil is found near the top of the carboniferous rocks. At all events, these oil districts produce an immense quantity, and every available foot in the territory wherever wells have been sunk is used. Even the space in the church yards is utilized. (2)

The results from the traffic in oil built up fortunes for a good many, and led others less fortunate to endeavor to "strike oil." Many places outside of the known petroleum territory were explored, and many fortunes sunk. A craze for some time seemed to have seized many, and as is usually the case in such instances, the excitement drowned the better judgment of people. Still, a large quantity is being annually shipped, or run by means of pipes to various points. (3) The purchase of additional fields by the various syndicates lately investing in oil will

(2) In the work entitled: "Mountain State," descriptive of the resources of West Virginia, which was written and compiled by Mr. George W. Summers B. Ph., the following is written on page 77:

"In these producing fields, the derrieks stand in every yard and street corner, and even the property devoted to religious worship is not free from them. One small struggling church in an oil town, leased its property for an oil well, and now derives enough revenue from the well in its back yard to build a handsome house of worship, and still to keep the treasury replenished."

(3) In the statistics here given as to the production of oil, we are satisfied they are low—may be less than is really produced. We desire to be in this, as in all things else, really conservative:

	No. of Barrels,	Value.
Turkey Foot.....	199,460	\$243,192
Mount Morriss.....	174,758	194,949
Volcano and Eureka.	165,735	211,526
Burning Springs.....	4,160	4,160
	<hr/>	<hr/>
Total.....	544,113	\$653,827

The above includes both illuminating and lubricating oils. But the quantity of the former is much larger than that of the latter, as 23,602 was the number of barrels produced of lubricating oil. The number of persons employed in this industry may be imagined, when we know that \$1,060,935 is invested in tanks, rigs, and wells alone. This amount does not touch a cent of the capital placed in the lease and purchase of oil territory.

(4) In speaking of oil in West Virginia, Prof. I. C. White, in a speech on the subject made at Charleston, West Virginia, some two years ago, said:

"It is my firm belief that this great oil belt, which has come down to our State through a distance of two hundred miles will extend clear across the same from Hancock to Logan. * * * * The gas wells at Warfield,

greatly increase the output, to say nothing of the development of the territory owned by the "Standard Oil Company." The quality of the petroleum is superior, and the illuminating oil is from 36 to 42nd gravity, the lightest grades being pumped from the deepest wells."

NATURAL GAS.

Of all the discoveries in West Virginia among the mineral resources, natural gas has been one of the most important. Whatever the origin of petroleum may be, that product and gas have a common one. Wherever the one is found, the other is sure to be seen, for it is not an uncommon instance for oil wells to be checked in the production of oil by escaping gas appearing on the scene. We are inclined to think that both members belong to that most wonderful series of chemical compounds known as the paraffins, of which paraffin wax may be regarded as a representative of the solid portion of the series, petroleum of the liquid part, and natural gas as the known gaseous member. Although natural gas has been found in the strata of every geological age, from the drift down to the potsdam, it has been chiefly in the Trenton limestone of Ohio, and the paleozoic strata of the upper coal measures of Pennsylvania that the great deposits of natural gas have been struck. The highest stratum in which any considerable quantity of gas has been found in Pennsylvania is the homewood sandstone, the first of the three known members of the Pottsville conglomerate. In this section of West Virginia, after a careful and painstaking investigation, we feel safe in asserting, although not agreed to by all, that the supply of natural gas comes either from the upper rocks of the Carboniferous age, or the corniferous beds of the Devonian. The character of those rocks, and the propinquity of gas to petroleum, render the assertion the most reasonable and warranted of all.

The advantages of natural gas as a fuel cannot be appreciated until it is used. It revolutionizes other methods of heating

on the Big Sandy, and those at Burning Springs, above this city, complete the chain of evidence that the oil-belt will extend entirely across our area from the Pan-Handle to Kentucky, for wherever the gas occurs the heavier fluid is not far away. How much of luxury, and comfort, this underground wealth will bring to the homes of our State no man can estimate, but our future in this respect could not be brighter."

Prof. White's knowledge on the subject of oil, coupled with his practical success, entitles his opinion to the highest weight.

houses and buildings. It relegates the expense of kindling wood, coal, dust, and the labor of making fires, to the history of the past. With the same facility that a gas jet may be lighted, a fire of gas may be started, throwing out its genial rays at once. The warmth may be regulated day and night, and a continual glow of the smallest dimensions sustained that may be increased in a second. Of course, wherever natural gas is found it supercedes wood, or coal, for fuel, and the superiority of this mode of heat is appealing so strongly to people at large, that once accustomed to it, they are loth to give it up. The cost of heating an ordinary room is very reasonable, and this mode of warming is ready for the sudden changes of temperature that frequently happen in the mountains. The question of supply has already become a matter of discussion, and while there is no danger of West Virginia's running short in this commodity at present, if the supply of the natural product should become insufficient, it would be replaced by the manufacturers of gas from coal for all purposes. When all things are taken into consideration—trouble, cleanliness, saving of labor, and cost, gas is the most sensible method of producing heat, and by far the most popular. The idea, that its heat is too dry, or unhealthy, is entirely erroneous, since practical experience has tested that subject.

The regions in West Virginia most prolific in gas are those from which petroleum and salt have been discovered. In the territory known as the "Volcano Uplift," where many of the best oil regions are located, natural gas comes in abundance. Wheeling, Sistersville, Parkersburg, Clarksburg, Weston, Fairmount, and Morgantown, enjoy the use of natural gas alike, all of which cities lie either in the oil-belt, or directly on its borders. So far, the quantity appears practically inexhaustible, and if the theory of continued generation is true, then the supply is more than likely to continue for a great while. New wells are being opened constantly; new fields tapped, and so far as human investigation can go, with logical results attached, Prof. White's opinion of the field extending from Hancock to Logan must be correct. He doubtless bases his admirable opinion on the extension of the oil stratum proper, and surely if such is proven, gas may be found at any location within its limit. We know that gas is prolific in the Kanawha region, some two hundred miles south of the Volcano district, which goes a long way to substantiate Prof. White's opinion. Natural gas is one of West Vir-

ginia's greatest products, and one of which she may justly feel proud.

SALINE MATTER, OR SALT.

Natural gas in West Virginia, appears to be intimately connected in some way with the salt-bearing territory. Generally, drilling and tubing is continued until a gas vent is struck below, which, rushing upwards with great velocity not only forces the saline liquid into the receiving vessels with a continuous flow, but under mechanical control, is made to serve the purpose of fuel in the evaporation. This economical feature is not found in any other salt fields except in this State, and the presence of the gas, that is utilized in evaporation, saves a considerable item of expense in the way of coal. Before the discovery of the gas, the brine was pumped up by horse or steam power. So, natural gas serves a double purpose here.

Hitherto, the salt works of Mason County on the Ohio, and those of the Kanawha region were the principal ones, and the only territory in which it was thought salt could be mined in West Virginia with profit. True it is, both at Bulltown in Braxton County, as well as Addison in Webster, salt was mined to a certain extent before the war, but the inaccessibility of markets, and absence of transportation facilities rendered this industry so precarious it had to be discontinued. Inasmuch as the Kanawha, and Ohio fields, produced the only commercial salt in West Virginia, the idea prevailed that those were the only salt-bearing regions in the section, that were profitable. But we are sure this idea is erroneous, from these facts: the salt-bearing sandstone formation does not end in the territory we have named, but is more extensive. By deflection from its general level, the salt-bearing section comes nearer the surface at the Kanawha salines, than in any other section of the valley. Throughout the salt-bearing sandstones, gas bubbles may be seen coming up through the very beds of streams; and along the banks, the same phenomena may be observed. The most remarkable of these is apparent in Elk River, at a spot called: "The End of the World" bend, half-a-mile below the mouth of O'Byren's Creek, in Clay County, where a cluster of gas springs, of nearly one-sixth an acre in extent, is boiling up through the bed of the river near its northern bank. And when from drought, the waters are very low, this gas can be ignited

from a flame, flashing with great rapidity from bubble to bubble across the whole cluster. At Duffield's bend a similar phenomenon is apparent. Three jets can be seen up the Elk, as high as Sutton, and around Addison in Webster County. So we may reasonably conclude that the saline may be found at various points in the salt-bearing sandstone, though of course deeper at some points than at others, where deflection has not taken place. A thorough test would reveal the theory advanced by us as entirely correct. The production of salt, while a pretty industry in this State, has by no means reached its full capacity, for many more thousands of dollars could be profitably invested in this State in the full development of the product. We feel certain that both Braxton and Webster Counties could be made to yield their quota of this valuable mineral, from the salt-bearing sandstones running through their territory, in the belt already discussed. (5)

From the slight discussion of this oil, gas, and salt region, which appears to be formed geologically, so that it shall bear those three products, two facts are self-evident. That running from the northern part of West Virginia, as if a continuation of the field of Pennsylvania is a strip of country crossing West Virginia from north to south; that in this territory, petroleum, natural gas, and saline liquids are found. The further fact may be relied upon, that this is a territory rich in the three minerals we have been discussing, which are liable to be found, or discovered anywhere in this horizon. And we feel safe in asserting that the future will bring forth some wonderful developments yet in oil, natural gas, and salt.

(5) From an investigation, the following compiled tables give an idea of salt production in West Virginia, in the section we are writing of:

No. Mines.	Amount of Product per month.
13	160,000 bushels.

A capital of a million dollars is invested in these mines, and the returns in some instances are large.

CHAPTER XV.

Mineral Resources of Central West Virginia Continued.—

Metallic Ores: Iron and Plumbago.—Rocks: Grey, Blue and Pink Sandstones. — Grit Rocks. — Similar Resemblance to Buhrstones.—Limestone.—Marble.—Gypsum.

Very much has been written and said on the subject of West Virginia's iron ores that is misleading. They have been either overrated as to purity or detracted from as to value—so much so, we approach this branch of West Virginia's mineral resources, fully sensible of the burden placed upon us. In everything connected with the region of which we are writing, it is our desire and intention to deal impartially with it, giving full credit where it is due, yet never over-rating the value of anything. Those who have discussed the iron ores have upon one hand asserted that they ran as high as eighty per cent. in metallic iron in some instances, while on the other, it has been contended they were so high in phosphorous, that the iron produced was not of good quality. A careful examination of this field in comparison with the New River—Cripple Creek region in Virginia, as well as the Alleghany section proper, in both States, has led us to the opinion that an extreme view has been taken as to their proper value, in both cases. (1) It is not

(1) In Mr. J. H. Diss Debar's Hand Book, published on the resources of West Virginia, in 1870, he writes as follows, concerning iron ore, Pages 136-137:

"The mineral of industrial value most abundant in West Virginia, is iron, which is almost co-extensive with coal, though not present in seams quite as thick, or as numerous. Iron ore is so generally prevalent in various forms throughout the State, that it would probably be more difficult to surmise where it is not, than where it may be found. * * * * * From the Coal River Region across the Great Kanawha, and up Elk River, iron ore is scarcely out of reach for a hundred miles. It occurs here in broken and continuous beds, principally as carbonates and oxides yielding from 61 to 80 per cent. of pure metal. Similar results are obtained from analysis of iron ores from Nicholas County."

The foregoing statement is too extravagant with reference to the iron ores. In the first place, veins of ore are not found everywhere, and the class of ore in this section would only yield 70 per cent. of metallic iron when pure. Consequently, we have seen no iron ores yielding from 60 to 80 per cent. in Virginia, West Virginia, or Kentucky. It requires a good grade of lake ores to do that.

expected that any one region shall produce every mineral in the geological column to perfection, and if West Virginia was bereft of iron ore entirely, she would still be second to none in mineral wealth. But such is not the case, since a part of the State is an ore-bearing section as far as iron is concerned. To a discussion of this subject with an impartial spirit we shall now address ourselves.

In addition to the main deposits of iron to which we shall refer later on, in a part of the region, a remarkably fine quality of iron has been found. We allude to Braxton County. In this country, bordering the Flatwoods, Gillespie, and High Knob neighborhoods, an ore exists that is equal to the class of iron ore found in the New River—Cripple-Creek-Region, known as "Gossan ore." When mixed with other ores it gives a peculiarly good character to the iron, while it produces an admirable iron by itself. It is one of the most important discoveries in the South in the way of iron ore, and it is admitted to be the only "red short ore" that has been found south of Mason and Dixon's line. Mixed with the ordinary fossil and kidney ores of this region, it gives a first-class iron for foundry or mill purposes, and permits the use of tons of phosphorous and manganese ores that could never be utilized successfully by themselves. In Braxton, on some of the highest points, a large deposit of red clay is found, covering the conglomerate rocks, and throughout this stratum the iron ore comes in immense boulders, varying in size. On fracture, these rocks present a dark, sub-metallic lustre—looking like solid iron. The boulders are found everywhere through the clays in the conglomerates, and the deposit of the ore is large, while the quality is most excellent. (1-1) There can be no doubt of the fact that this ore is of a most superior class,

But while we disagree with Mr. Diss Debar's statement as to the purity of these ores in iron, we undoubtedly deem them workable, and in paying quantities. Prof. White has said concerning them:

"They are too high in impurities—phosphorous especially, to make good iron. They are furthermore of a silicious nature, resembling those of the Alleghany region, which are too full of silica."

(1-1) Analyses of this iron ore, from samples taken near the tunnel at Flatwoods, and about four miles from Gillespie, give the following results:

	No. 1.	No. 2.
Metallic iron.....	57.250	54.300
Phosphorous.....	.095	.058
Silicious matter.....	4.624	4.280
Phos. in 100 parts iron.....	.074	.100

and far ahead of any other iron ore in point of quality yet discovered in West Virginia. The situation of the ore among a stratum belonging to the Silurian period marks the upheaval that drove the coal measures into infinity, for where this ore exists no coal can be found. The specific gravity of the raw ore is great, and it is of the class that may be termed a soft-running ore for all furnace purposes. From every outward indication the quantity is large.

As we have previously seen, this section lies principally in the Carboniferous period, and in the stratum of that age are several veins of iron ore. Under the finegrained shaly sandstone, that lies generally underneath the upper measure of coal, is a slight seam of silicious ore, that may be seen anywhere in this section in its proper mineral horizon. The vein is from twelve to eighteen inches in diameter, and is quite persistent. Now, the question arises, will this ore do for furnace purposes? Experience, and observation, are our only guides in these matters, coupled with a proper test of the mineral. From personal inspection at the furnaces in Pennsylvania, as well as Virginia, ore that is not superior to this is worked, and makes a fine foundry iron. One fact in regard to iron ore should be constantly borne in mind, when apparently it appears high in both phosphorous and silica. That the several kinds of iron ore differ somewhat in the quality of the iron they afford is true; but the greatest part of the supposed difference, if bog ore is excepted, depends on the mode of working, and the use of proper fluxes in the right proportion. By the aid of a good fluxing material administered skillfully, ore that is high in silica may be so run through a furnace as to produce a fairly good iron. We feel safe in saying that while in the present plentiful state of iron ore it would scarcely be policy to work a vein of twelve or eighteen inches in thickness, yet this ore will make a merchantable iron, and the day will come when it will be brought into requisition. With veins around it three or four times as thick it would not be reasonable to suppose that it will be utilized as yet. (2)

(2) Average samples of this ore are taken from the run of the openings give the following results:

Metallic iron.....	40.71
Phosphorous.....	0.27
Silica.....	24.96

This ore from its analysis is unquestionably high in silica, but by proper fluxing could be made to produce good iron.

Under the middle sandstones that average from eighty to one hundred feet in thickness, throughout this region, we have generally a vein of about one foot in thickness. As this would not justify mining at all, in the present day, we pass over it, as it is unnecessary to discuss it, farther than to say in quality it is merchantable.

But by far the most prolific, and persistent of the iron veins in this section is the one lying under a limestone (oolitic) and at times under a sandstone, of an argillaceous nature. This ore is generally in the shape of oolites, commonly called "Kidney ore," and is persistent in a stratum of clayish sand embedded under the rocks mentioned. The vein is from three to four feet in thickness, and contains an ore that is valuable from a standpoint of both quality and quantity. In Marion County, Harrison County, Lewis County, Taylor, and Barbour, as well as Nicholas and Webster, this vein is quite persistent, varying in different places in thickness, but never becoming so thin as not to be valuable. It can be followed through Eraxton, and part of Gilmer, with a lessening thickness as we proceed southward. In Barbour County, where the old Valley Furnace stood, this ore was used in part with a blue ore that was roasted. The persons engaged in the manufacture of iron at that point did not seem to know that this brownish-yellow ore would have made a finer iron, without the mixture of the blue. There is a softness of texture about the ore that relieves it of the necessity of being baked, causing it to run easily through a furnace. The old furnace near Clarksburg, that was owned and operated under Judge J. G. Jackson's régime used the ores of this horizon, and produced an excellent grade of pig-iron that brought the highest market prices at Pittsburg, where it was shipped down the river in boats. Another furnace in the central part of the State used the ores from this vein, making an unusually good sample of pig-iron. From samples of the product of two of these furnaces, there is no doubt of the fact that the ore in question was a good furnace ore for all foundry and mill purposes. (3) It is true these furnaces are no longer running, but the cessation of work did not arise from any defective quality in the product, but from inaccessibility of markets, and want of trans-

(3) From the pig-iron made of this ore a strong wrought-iron nail was manufactured in a forge near the furnace that brought a good price in Pittsburg. These were shipped there, with the pig-iron. This fact sets any doubts at rest as to the quality of this ore.

portation facilities. The rapid construction of railways into other ore-bearing territory where furnaces were located, made competition in iron so strong, the furnaces here, that sent their product by boat and on wagons were forced to suspend. All of the iron manufactured in this section may be said to come principally from this vein, that crops out on the sides of the hills in Marion, Harrison, Lewis, Braxton, Taylor, Barbour, Webster, Nicholas, and Gilmer. It is quite extensive and persistent in range, and the outcropping marked. It is easily mined, by side-tunneling into the vein in the hill, and is taken out generally in the shape of large "kidney," oblong pieces, that are imbedded in the clay stratum, or rocks. On fracture, the outer rim presents a sub-metallic lustre, the inside being filled often with clay, and sometimes limestone, or a decomposed stone like it. In point of quality, justice prompts us to say, that it is what may be termed good. From the product that the ore made, as well as an analytical test, no doubt remains as to its being sufficiently pure for the manufacture of a good grade of iron, (4) The quantity of this ore throughout this section is large.

BLUE ORE.

In this section of Central West Virginia, as for instance in Barbour County, a hard, lump ore is found, commonly termed

(4) Three analysis of this ore were made—one from Barbour, another from Braxton, and a third from Nicholas. These gave a fair average of the quality of the whole. They are as follows:

	Barbour.	Braxton.	Nicholas.
Metallic iron.....	49.875	44.950	48.500
Phosphorous.....	00.146	00.172	00.169
Silica.....	11.430	12.320	13.281
Phosphorous in 100 parts iron..	.292	.304	.286

From the foregoing assays it is readily seen that this ore is neither high in silica, nor phosphorous. When we use the word high we speak comparatively, meaning, that in comparison with other ores of the South it is by no means an impure, or poor ore. In silica it is higher than in phosphorous, but good fluxing would make a clean product of the raw ore. Of course this iron ore would seem high in both phosphorous and silica if compared with the lake ores, which being composed largely of almost pure iron, are singularly free from every impurity. It is contended by some persons that Bessemer steel can never be manufactured from the Southern ores. After witnessing some of the processes through which the Southern pig has been carried, there can be but little doubt of these facts; that with proper fluxing in the furnaces, and some care in working the pig through the mills, that a good grade of what they term "Bessemer steel," can be produced—sufficient for any purposes of man.

blue lump ore. It was used quite extensively in some of the old furnaces, being mixed with the argillaceous, oolite ore we have just been discussing. By a process of baking, or roasting, this ore was reduced in impurities, and its value enhanced in metallic iron. When mixed with the softer brown ores, it made a good pig-iron, but as it is extremely low in metallic iron, we doubt if it could be profitably used alone. It is this class of material, coupled with the silicious ore we first discussed, that has caused some to underrate the finer grade of iron ore we have named, and given particular attention to as a matter of justice.

It is frequently asked: what is West Virginia's future outlook on the subject of iron? Why has she not more furnaces within her borders if she is plentifully supplied with iron ore, coking coal, and fluxing material? To these inquiries but one logical reply can be given. The law of demand is just as inexorable as that of supply. If the supply of raw material is greater than the demand for the manufactured product of the same material, then much of it must remain in its crude state. Or, if the demand for the present is supplied by a superior grade of raw stuff, the lower class of the latter must wait until the former is consumed. And such is the present condition of affairs with reference to the iron ores of West Virginia. We had just as well look facts squarely in the face. This is just the trouble that West Virginia's ores have to face at present. The superiority of the lake ores over these; the ease and cheapness with which they are mined; their immense quantity at present; and competition in freight rates, give them advantages for the present with which the West Virginia iron ores cannot successfully compete. Up in Minnesota these rich ores are being constantly developed and shipped to furnaces north and east at marvellously low rates. So long as this state of affairs last the ores here are most likely to remain in a crude state. Again: for some time past the supply of iron has been so prolific that the demand has been more than filled. This in a measure has deterred iron men from opening furnaces in this region of country. But by the past we may judge the future. The rapid increase in the consumption of iron for the past few years shows that the ores here must eventually, at no late date, come into requisition. (5.) When that period comes to pass, West Virginia will have a furnace in probably every county we have named. Where the raw material exists the manufacturer must come when ordered by the inexorable law of demand.

PLUMBAGO.

In both Braxton and Webster Counties samples of this mineral have been found, and tested. These are foliated and massive, of a metallic lustre, and from dark grey steel to iron black in color. On a test, it is infusible before the blow pipe, both alone, and with reagents; it is not acted upon by acids. As no development has been made of this mineral as yet, it is impossible to determine its quantity, but extrinsic circumstances go to show that it is in some quantity.

ROCKS: WHITE, GREY, BLUE, AND PINK SANDSTONES.

The carboniferous rocks in the region of which we are writing afford a magnificent class of minerals that come under the head of stones. Paramount is the hard, compact, and often granular sandstones good for building material, flagstones, cobble blocks, and street pavements. The colors vary, principally among which may be named white, grey, blue, and pink. In Harrison, and Lewis—particularly the latter, a building stone of splendid grade is found. Eight miles south of Clarksburg, in the Mount Clare Field, is a sandstone (grey in color) that has no superior as a building stone. It is compact, close, and solid in texture, with a sufficient granular impregnation to render it durable when exposed to atmospheric action. The stratum of this rock ranges from fifteen to forty feet in thickness, and quarries out well. From the quarries of this locality the stone was gotten that was used in construction of the government building at Clarksburg. It makes an imposing structure, as handsome as it is durable. Sandstone is formed by a sedimentary deposit from water of granules which have resulted from the disintegration of older rocks by various kinds of dynamic action, weathering, and erosion. Naturally, therefore, grains of quartz, the

(5) The increase in production of iron in the United States in the past few years is ahead of that of any other country we can name. The following table will give an idea of the rapid development of iron:

			Tons.
In 1857,	the product	was.....	883,137
In 1866,	" "	"	1,461,626
In 1878,	" "	"	2,577,361
In 1889,	" "	"	8,516,068
In 1890,	" "	"	10,309,028
In 1893,	" "	"	11,482,753

From the foregoing statistics it can be seen that about 22,000,000 tons of iron ore are used annually in this country. This product must be used up gradually—nay rapidly, in a few years, so as to bring the raw material from every place into requisition.

hardest essential component of the older rocks, are vastly more abundant in sandstone than in all other minerals; indeed, many sandstones are almost entirely made up of particles of quartz. The size of these granules vary considerable, which makes the distinctive difference between fine and coarse sandstone. These granules are usually held together by some cementing material, and the nature of the latter is an all-important consideration bearing upon the strength, durability, and beauty of the stone, and consequently upon its value as a structural material. The cementing ingredient of this stone of the Mount Clare Field is of a wonderfully tenacious character, giving durability to the rock for all architectural purposes. In some structures this stone has been known to be standing for over a hundred years, and presents no indication whatever of disintegration, or yielding. The edges, and exposed sides are as solid, and close in texture as that of the stone newly quarried out. A better grade of building stone for all purposes could not be found anywhere. (6) The stratum is a persistent one, running through many miles of territory, and beautifully located for cheap quarrying.

But by far one of the most attractive, as well as serviceable building stones, is the blue sandstone, that runs through the geological structure of Lewis County. The mode in which it can be quarried out, added to its beauty and utility render it second to none for construction purposes. On the top of the stone, the layers are usually thin, but as the stratum goes downward, the stone becomes greater in thickness, until it reaches a splendid proportion. Throughout the section where this stone lies, many foundations, and structures are built of it, among which may be

(6) The analysis of this stone shows it to be a siliceous rock, hard, durable, and capable of withstanding great crushing strength, and is not subject to alteration from exposure. From samples taken from the quarry, the following results were obtained:

Silica.....	88.89
Alumina.....	5.95
Iron oxides.....	1.77
Manganese oxide.....	0.41
Lime.....	0.26
Soda.....	0.86
Carbonic acid, water and loss.....	1.83

From the foregoing it is readily seen that silica is the component part of this stone. Some alumina, a little oxides of iron, and carbonic acid is discovered with a trace of lime, soda, and Manganese oxide. The lime and other ingredients that disintegrate from exposure, are barely perceptible, or traceable.

mentioned the Asylum for the Insane at Weston, and the West Virginia and Pittsburg Railroad Depot. Both of these structures are models in their way, the former being one of the largest and most imposing buildings in the State. This stone is practically composed of silica, cemented together with silica. A slight amount of argillaceous material is present, but not sufficient to affect the texture of the rock. Owing to the minuteness of the silica, and the firmness of the siliceous cement, the stone is exceedingly hard and durable, and often difficult to work. (7) It would not be an easy matter to find a more valuable stone than this bluestone out of which the asylum at Weston is constructed. Immense quantities of it lie in Lewis as well as Braxton Counties. One of the largest quarries of this material is located in Lewis, not far from Weston, and would doubtless yield a handsome return if developed.

Braxton, Nicholas, Wood, Jackson, and other counties, possess this grey stone we have been writing of, while Webster has an acquisition in the shape of stone that is rarely seen. Near Camden-on-Gauley, in this county, is a sandstone almost pure pink, that ranges high in silica without a trace of lime. The stratum of the rock runs north and south, along the western banks of the Gauley River, almost at Camden-on-Gauley, and dips at an angle of fifteen degrees south of the latter place. The delicate pink of this stone, combined with its close texture in silica, render it a building material of rare value, for construction, or dressing purposes.

It is a fact worthy of observation that this whole region of which we are writing, is very prolific in the various colored sandstones we have named, that are admirable for building purposes. Along the Baltimore and Ohio Line many quarries have been worked with a profit, and the cities and towns in the State show by the imposing structures they possess, that this material is both useful and pretty.

(7) From an analysis of this stone the following results were obtained:

Silica.....	97.00
Iron oxides.....	1.00
Lime.....	1.15
Soda.....	.64
Carbonic acid, water and loss.....	.21

At both the close granules and the cementing material in this stone is silica, it runs high in that mineral.

GRIT ROCK.

In some parts of this region, a hard, gritty sandstone, or grit rock, is found, that is most prolific in Barbour County, on Cove Run, and at Pickens in Randolph County, than in any other portions of the section. These are largely used for millstones, and when of firm texture make a good substitute for buhrstone. The true buhrstone is a cellular, silicious rock, without apparent granular texture. It is a sandstone containing fossils, and generally overlies the coal. At Pickens, the sand-rocks so nearly resemble this substance of buhrstone that they make good milling stones. This stone occurs above the coal in Webster County, as well as Harrison and Barbour. It is a material that properly developed would make a very pretty industry. In addition to this use, the gritty sandstone is most excellent material for furnace lining and hearths, as it is capable of standing great heat. It possesses great resistance to any class of heat, withstanding a very high temperature—in fact, it appears from testing, that a high degree of heat only glazes it, rendering it all the more invulnerable to fire when applied in the most intense manner. (8) In the matter of sandstones, for bridge, dam, and railroad work, West Virginia ranks fourth in the Union of States, being exceeded only by Pennsylvania, Ohio, and New Jersey.

LIMESTONE.

This most valuable commodity is found in abundance in many portions of the section of which we are writing. In Barbour, Taylor, Harrison, Doddridge, and other counties, it occupies its proper horizon in the Carboniferous period. It consists of lime, and belongs to the calcite species, the usual composition of which is the carbonates of lime and magnesia. These are either compact, or granular in texture, the latter appearing like loaf-sugar, from which the finest statuary marble is made. In this region we have only the compact to deal with, varying from light gray to dark blue in texture. The stone in some places, is of that kind known as the gray-coraline, which is so admirable for fluxing purposes. This limestone gets its name from its gray color, and the fact it fractures in a choncoidal manner, like a piece of coral reef. The quality is admirable

in many parts of the section, and practically exhaustless. (9) The limestone proper in this region is suitable for all purposes, such as fertilizing, building, fluxing, and lime-making. The word "limestone," derives its name from the white lime the stone produces when burnt.

MARBLE.

In all limestone regions, where the proper conditions exist, marble may be looked for with reasonable certainty. While limestone and marble are very nearly related from a chemical standpoint, they differ materially in structure and purity. The purest and most beautiful marble is undoubtedly chrysalized limestone, but commercially speaking the two are as different as light is from darkness, and vary equally as much in the uses they are put to by humanity. Water, percolating through a limestone stratum, becomes charged with carbonic acid. If erosion has taken place beneath the limestone proper, leaving a fissure, then this will become gradually filled with the sediment deposited by the water charged with carbonic acid, until a chrysalized substance is made composed almost entirely of the pure calcium carbonate, or carbon of lime—this is marble. In Harrison County a remarkably good specimen of the compact, grey, variegated marble has been found that takes a beautiful polish, and is particularly pure in quality. (10) Wherever the limestone stratum is persistent, and the material is high in carbonate of lime, we may confidently explore for the compact marble, varying in colors from light to dark. In fact this stone

(8) A Mr. Roberts, now residing at Pickens, West Virginia, manufactured from this gritty sandstone, a brick, that he called a "silica brick," for furnace purposes. It stood on a test over 4,000 degrees of heat, and from every appearance, would resist any quantity. This brick took the premium at the "World's Fair," over any of its kind.

(9) From an analysis of several samples taken from the run of the limestone strata, the results were as follows:

Carbonate of lime.....	90.08
Carbonate of magnesia.....	4.00
Alumina and oxide of iron.....	0.72
Insoluble silica.....	4.56
Water and loss.....	0.64

(10) This stone, samples of which have been tested, and polished, gives the following analytical result:

Calcium carbonate.....	98.375
Magnesium ".....	0.790
Iron ".....	0.654
Matter insoluble in acids.....	0.630
Organic matter.....	0.080

has never been prospected for in this region with any degree of carefulness, and that discovered in Harrison County was the result more of accident than otherwise. In Barbour, Taylor, and Doddridge Counties, the conditions exist for the production of this valuable mineral.

GYPSUM.

The Permian beds of the Carboniferous period are composed mostly of sandstones, marlites, and impure, or magnesian limestones. In this period the calcium sulphate, and sulphate of lime, play a very important part, producing what is commonly known as gypsum. This mineral is used for the manufacture of plaster-of-Paris, for fertilizing purposes, for calcined plaster, and the white plaster used for sculpture, and artistic work. It is sometimes white, but comes in other colors. Two kinds of this product are found in this section of West Virginia: one in Barbour County, near the Valley Furnace; the other in Harrison County, near Lumberport. The first is what is known as the snowy gypsum, including the white, or light-colored compact gypsum, possessing a very fine grain. This material can be used for the manufacture of plaster-of-Paris for casting and moulding purposes. It is also useful for giving a hard finish to walls. The purest class of this product is known as alabaster, and is fine enough for the production of vases, ornaments, and the like. The gypsum found near Lumberport, in Harrison County, is yellow in color, coming under the head of fibrous gypsum, on account of its being like the fibrous carbonate of lime. When burned, it makes a fair plaster-of-Paris, and is particularly fine for fertilizing purposes. The quality of each is good. (11) In quantity, both of these gypsums excel. The stratum in Barbour is thick and persistent, while that in Harrison is in place. As yet this mineral has never been worked, but in the near future this section will have an industry to manufacture this valuable product.

(11) An assay gives these results as to gypsum:

Barbour County.	Harrison County.
Calcium sulphate .....91.00	Lime..... 32.35
Carbonate of magnesia 3.00	Sulphuric acid..... 46 38
Carbonate of lime..... 6.00	Water .....19.70
Oxide of iron..... ..	Magnesia..... 0.54
	Alumina..... 0.60
	Insoluble residue... .09

That from Barber County is of much purer grade than the gypsum found in Harrison County.

CHAPTER XVI.

Mineral Resources of West Virginia Continued. — Slates.— Drawing Slate.—Earthy Minerals.—Fire Clay.—Brick Clay. Potters' Clay.—Glass Sand.—Casting Sand.—General Resumé of Mineral Resources of Central West Virginia.

The slates in this section of West Virginia, range all the way from the compact, close-grained slate through the argillaceous shales to the slaty clays found in many places. Among these rocks in Randolph County, near Pickens, West Virginia, a good quality of drawing slate was found, that lies in fine working quantities. It crops out near the top of a mountain just above a stratum of shale that on examination proved a superior fire-clay. A thorough test was made in a practical manner of this slate that showed it could be used for all school and drawing purposes. There must have been some peculiar chemical action with reference to the stratum of slates in the immediate region, we name, since the rocks of the same class in other counties do not have the finer and more compact variety seen here, of a bluish shade of color. From the fact that pieces of the slate in this stratum have been exposed to outward action of the elements without disintegration for ten years, we may naturally presume that the material will not disintegrate on exposure. From the composition of these slates, we may confidently assert that in addition to the drawing slate the following variety of materials may be found: the hone slate, or whetstone, and an argillite slate good for paving purposes. And while the quantity of roofing slate has not been developed in this section one or two good veins of it has been found. (1) These follow the main lead of slates under the capstone of the iron ore seams, and there is no reason why they should not be in ample working quantities.

(1) In another part of Randolph County than the one we have been discussing, was found a fine-grained argillaceous slate of a dark dull, blue color. From a test made this slate splits easily, and could be punctured by nails without fracture. That it is a good roofing slate, there can be but small doubt. It is in quantity.

EARTHLY MINERALS.—FIRE CLAYS.

The deposits of fire-clay in the region of country of which we are writing, while only partially developed, are likely in the future to prove among the the most profitable investments that can be made in this State. In the first place, large deposits lie in very many of the counties in Central West Virginia, while all of them possess stratas of this valuable material. In Marion, Harrison, Lewis, Upshur, Randolph, Tucker, Webster, Gilmer, Jackson, Wood, and Ritchie, these clays can be found generally running with the coal measures, and often embedded beneath them. They range in veins from two to four feet in thickness, rarely reaching the latter dimensions, however. They vary in color, some being yellow, while others are white, grey, and dark blue. Among the best of these clays is one of a slaty-clay in appearance, varying from light blue to dark purple, almost black. Out of this shale the fire-bricks in England are largely manufactured, and they serve their purpose well. This material is used also at the fire-brick works near Grafton, West Virginia. From an examination of these various seams of clay, their location geologically appear to be somewhat apart. Underneath the upper coal measure very often is found a soft blue-grey vein of clay, that is admirable for ordinary brick-making. Beneath this, we usually find a dark shale varying from dark-blue to black that makes a most serviceable clay for fire-brick. The product of this clay has been admirably worked in several factories, proving to possess more than ordinary capacity in extreme heat. In some cases in the mountains, below the soil of the earth appears a stratum of slates that lie above the coal measures proper. There are several formations of this slate. In some instances it is a hard, close-grained substance, serving more or less as a roofing for coal, while below, the slate has disintegrated into a clay substance that renders it admirable for the making of fire-clay brick, when used alone, and a pressed brick of wonderful texture when used with ordinary clays and shales. (2)

The slaty clay is the material out of which the English fire-clay is made, to which allusion has already been made, that

(2) Mr. Roberts, of Pickens, West Virginia, mixed a quantity of this fire-clay with the ordinary clay, and a pressed brick was the result, that took a high premium at the "World's Fair," and is a beautiful sample of brick of wonderful durability, and texture.

stands a strong action of heat in a most satisfactory manner. The freedom of this substance from all traces of lime, and impurities, renders the brick non-fusible, giving a material of extreme durability. The quantity of this slaty-clay below the coal measure is large, and lies in an unbroken formation almost. In quality it is of a very superior grade, and throughout the region of which we are writing is found in large quantity wherever the coal measures run. (3) The white, grey, and yellow clays, while good materials for making fire-brick, are not so superior as the one we have been discussing. The deposit of these appear in different geological structures from that of the shale. These latter clays may be found in the valleys, and running along the base of the hills. They are higher in silica, and lower in alumina than the shale-clay, yet they make two excellent products: a good fire-brick, and a paving brick that has given satisfaction. The streets in Parkersburg, and Huntington both, are paved with the same material, manufactured from these clays. So far, they have been found in Marion, Harrison, Webster, Clay, Jackson, Wood, Ritchie, Monongalia, and Preston. The quality averages well, while the quantity is large, the material ranging from two to four feet in thickness. These clays, for the purposes named, have been profitably worked. (4) The paving material to which we have alluded, will, sooner or later, supercede the cobble-stone, and rock used in many cities from the fact they are very durable, and make a much smoother street. The fire-brick are particularly good for furnace lining.

(3) An analysis given of this clay, that is correct yielded these results:

Silica.....	45.86
Alumina.....	44.23
Magnesia.....	0.00
Potash and soda.....	0.24
Moisture, hygroscopic.....	0.70
Moisture combined.....	} 08.35
Organic matter.....	

“Natural Resources of West Virginia.” By G. W. Summers.

(4) From analyses made of these clays with average samples taken from two regions in Central West Virginia, the following results were obtained:

	No. 1.	No. 2.
Silica.....	68.16	54.27
Alumina.....	24.11	33.83
Oxide of iron.....	0.01	0.01
Magnesia.....	trace	0.02
Potash and soda.....	trace	trace
Moisture, hydroscopic.....	0.85	1.00
Organic matter and moisture combined	0.66	10.86

BRICK CLAY.

The ordinary clays for brick are extremely prolific in this region. The clay is sufficiently low in silica, and high in other ingredients to make a good product. As has been stated, these ordinary clays mixed with the shale so admirable for fire-clay, make a pressed brick of marvellous beauty, and strength of texture. Inasmuch as the shale is free from iron and other impurities, this pressed brick possesses great durability, and must preserve its solidity for a great length of time. Bricks manufactured here are shipped to West Virginia's sister States in some quantity.

POTTERS' CLAY AND PIPE CLAY.

These clays exist in this region in ample quantities, and from the fact they are plastic, and free from iron, make an excellent material for the purposes above named. The colors predominating are white and blue principally, with sometimes streaks of brown from the iron permeating it. Whenever these occur, they render the pottery more or less discolored, which lessen the value of those clays touched with the iron. But in many counties, this clay is free from almost every impurity, possessing the necessary qualities to make it exceptionably good material. Both white and blue clays are plastic, "consisting mainly of pulverized, or altered aluminous minerals, (largely feldspar)." They owe their plasticity to the alumina, and should cease to be called clay when the proportion of silica is too high for plasticity. But these are low in silica, and high in alumina, without iron, lime, or magnesia, and if possessed at all of any of those three ingredients, they are found only in traces. These clays in the geological formations here, result from the decomposition of shales. In every county in Central West Virginia they are found, and they must eventually become the raw material for a large industry—the manufacture of pottery, and earthenware of every description. It is a fact, that at present, notwithstanding the rich deposits of these clays that large quantities of pottery and earthenware are shipped into the State, when if the raw material here was worked up, this country could not only supply a great home consumption, but furnish foreign States with the product. Some manufactures of these articles are now established, and the purity of the

material is attracting people from various sections of the country. This clay is a first rate material, too, for the manufacture of pipes.

GLASS SAND.

In Randolph, Barbour, and Webster Counties, in the grit rocks, or sandstones, the formations vary from quartz rock to the sandstones proper, used for various purposes. The granular quartz of this class of rocks is the most refractory of rocks. It is used, therefore, for hearthstones, for lining of furnaces, and for lime kilns, and from a test will bear an almost incalculable amount of heat. But by far the most important use that the granular quartz is put to, is for the manufacture of glass, sand paper, and the sawing of marble. In several sections of this part of West Virginia the quartz occurs to crumble to a fine sand, and is highly useful for the manufacture of flint glass. The best grade of this granular quartz is almost pure silica, free from any taint of iron. This purity is apparent in the clearness of the grain under the lens, or their white color. The quartz closely resembles that of Berkshire, Massachusetts, and Lanesboro, in the same State. It is very pure, and nearly pure silica. (5) This granular quartz for the reasons mentioned is highly valuable, and renders the sections in which it is so prolific of more than ordinary value. In Morgan, Marion, Preston, Barbour, Randolph, and Gilmer Counties, this granular quartz occurs. Wherever the white coarse-grain rocks occur, this glass sand can be found in a high state of purity. No industry could be started that would be more profitable than one for the devel-

(5) This granular quartz heated to fusion with the alkali of potash, or soda, produced a silicate of potash, or glass, that on analysis gave the following results:

Silica.....	73.0
Potash	16.6
Lime	10.4

Notwithstanding the fact that the essay showed the value of the quartz for glass sand; as the product was made out of the State, and some doubts expressed as to the quality of the sand, a practical test was made at the glass works in Fairmont, West Virginia. The following certificate from the foreman set the matter at rest:

“FAIRMONT, West Virginia, October 16, 1894.

I have examined samples of sand exhibited to me by a gentleman investigating the resources of West Virginia along the West Virginia and Pittsburg Railroad, and other lines, and found in Central West Virginia, and consider it a good grade of sand for manufacture of flint glass. This grade of sand is superior to the sand used at this point for manufacturing bottles, &c.

Signed: GEO. W. PORTER, Foreman.”

Flint glass is the class from which crystal is made.

opment of this valuable material. At Fairmont, and Morgantown, glass works are profitably established, which get from abroad a sand that lies in this State equally as fine.

In this region, along Tygart's Valley River, a superior grade of casting sand is found in large quantities.

From the discussion of the mineral resources of West Virginia in the counties of which we have been writing, it is easily seen they are unusually rich in large deposits of a variety of minerals. Those we have touched upon are all in Central West Virginia in such quantities as would pay any one to invest the necessary capital to develop them. From a recapitulation here, we find the following in persistent seams, and veins. Coal, bituminous and cannel. Iron ore, plumbago, sandstones, limestones, marble, gypsum, slates, fire clays, brick clays, potters' clay, glass sand, casting sand. After a careful review of the coal fields; the iron ore, as well as the rest of the catalogue of minerals, it is conservative to say that no State in the Union is richer in mineral wealth than the one we are now describing. And when we take the general topography with the geological structure, we cannot say there is any occasion for surprise, as this part of West Virginia is but a continuation of that same formation of Pennsylvania that has given it such a national reputation for mineral wealth. If this territory was as finely developed as that, Central West Virginia would send forth as much for the use and want of humanity as the other State. But her material welfare, and future pecuniary rank as one of the richest States in the Union is surely a thing of certainty, that is merely a question of time. The manufacturer, to compete with the many engagers in the same craft successfully, must come where the raw material is most abundant, and where he can make the most profit on his wares. Here, in this section the conditions for performing that feat are as perfect as those of any other State in the Union. Transportation facilities are penetrating all parts of the region, while the abundant raw material, and cheap labor, give the manufacturer here as fine a showing as he could have in any other State. Within the past few years no State has progressed so rapidly in material prosperity as West Virginia, which, with its boundless riches, is but in the infancy of its advancement.

CHAPTER XVII.

Financial Aspect of this Section of West Virginia.—Valuation of Real Property.—Valuation of Personal Property.—Banking Facilities.—Investments in the Region.—Results of the Same.

The financial aspect of this section of West Virginia is decidedly a remarkable one, when all things in connection with it are taken into consideration. For the period of its development, no region can show such rapid strides in the way of material wealth in every form as Central West Virginia. While agriculturally speaking, the region was never of the best character as a whole, yet the opening up of the mineral deposits, and manufacturing industries following in their train have given the country a marvellous increase in the way of values both in real and personal estate. The building of cities enhances the value of lands around, while acres of the mountainous tracts on account of vast mineral deposits have become a hundred fold more valuable. The result is, the taxable values have increased wonderfully throughout the region. (1) A statement

(1) From the last report of the Auditor of West Virginia, the assessable values of real and personal estate, were as follows:

TOTAL VALUE OF REAL ESTATE BY COUNTIES.	
Barbour.....	\$1,975,057.00
Braxton.....	1,719,647.00
Calhoun.....	712,694.00
Clay.....	695,814.00
Doddridge.....	1,586,675.00
Gilmer.....	1,038,687.00
Harrison.....	5,951,446.00
Jackson.....	2,803,690.00
Lewis.....	2,866,949.00
Marion.....	4,386,733.00
Mason.....	4,100,047.00
Pocahontas.....	2,131,089.00
Randolph.....	2,581,342.00
Ritchie.....	2,155,261.00
Roane.....	1,405,435.00
Taylor.....	2,538,814.00
Tucker.....	1,499,941.00
Upshur.....	2,868,381.00
Webster.....	1,063,953.00
Wirt.....	1,183,765.00
Wood.....	6,357,581.00

of the increase of some of the counties will serve to illustrate the advance. (2) This has arisen from the resources already named, with reference to the increase of values in property here: the building of towns, and development of the mineral resources. And in Central West Virginia especially, we have untold mineral

While those are the taxable values of the real estate, they are not a true representation of the values we wish to express. The real property, on a disinterested investigation shows that the estimates taken by the assessor are at least one third too small on an average. To the amount of taxable real estate for each county add one-third of the amount, and a correct estimate will be arrived at.

VALUATION OF PERSONAL PROPERTY.

Barbour.....	\$ 846,993.00
Braxton.....	651,846.00
Calhoun.....	279,110.00
Clay.....	100,742.00
Doddridge.....	701,948.00
Gilmer.....	453,676.90
Harrison.....	2,192,137.00
Jackson.....	853,460.00
Lewis.....	1,129,020.00
Marion.....	2,364,613.00
Mason.....	1,329,315.00
Nicholas.....	353,460.00
Pocahontas.....	424,748.00
Randolph.....	356,231.00
Ritchie.....	699,768.00
Roane.....	554,195.00
Taylor.....	1,183,810.00
Tucker.....	314,570.00
Upshur.....	822,126.00
Webster.....	156,810.00
Wirt.....	287,181.00
Wood.....	2,041,670.00

The same rule we have applied to the assessment of real estate below its value may be used to govern the personal property, except the latter is about one-fourth less than the taxable amount shown in tables of figures.

(2) The counties that have increased in values may be named as follows, with amount:

REAL ESTATE.—INCREASE OF 1892 OVER 1891.

Braxton.....	\$ 694,527.00
Calhoun.....	91,172.00
Clay.....	356,783.00
Doddridge.....	90,246.00
Gilmer.....	394,650.00
Jackson.....	168,877.00
Lewis.....	444,728.00
Marion.....	807,898.00
Mason.....	89,893.00
Nicholas.....	16,451.00
Pocahontas.....	612,906.00
Randolph.....	1,322,567.00
Ritchie.....	335,466.00
Roane.....	288,641.00
Tucker.....	744,365.00
Upshur.....	477,829.00
Webster.....	354,526.00
Wirt.....	115,306.00
Wood.....	453,751.00

wealth to be yet opened up, that must increase these values three-fold. And the increase of the year 1892, over that of 1891, gives us an idea of what rapid advancement may be expected from the region, when we remember its resources are but partially developed.

The banking facilities of this portion of West Virginia are not only amply sufficient for the needs of the people, but rest on unusually good foundation. If any evidence was necessary to sustain this fact, it was amply produced during the financial stringency of last year, that closed the doors of pecuniary institutions the country over. But throughout the broad domain of the State of West Virginia, there was not a single failure, and but one suspension. This occurred in Wheeling, West Virginia. The institution soon righted itself, and continued operations. The banks are located in the cities and towns, consisting mainly of National and State banks, and some few private institutions. A careful investigation shows these banks to be governed by prudent, painstaking men, entitled to trust and confidence, with ample capital to meet every requirement. Particularly, in this section of West Virginia is money plentiful and easy, owing to the needs of the many industries that are being developed, and capital outlaid. During the stringency, the scarcity was not felt here to the extent existing in other localities in West Virginia, as well as other States. The banks seemed amply supplied to meet every demand, paying always in currency. In addition to the regular banks we have named, there are various institutions such as, safety trust companies, building and loan associations, and brokerage establishments. Through these ample pecuniary facilities are furnished, and money is easy for every legitimate purpose.

One of the secrets of the greater amount of funds in this section arises from the large number of investments made, and being made, in the region. Large tracts of mineral as well as timbered lands have been sold, which in some cases are being now developed. The capital necessary for the purchase of these was lodged in the State, and that requisite for development, circulated here. The logical result was, money became extremely plentiful, and pecuniary institutions grew, from a national bank to an insurance company. There is a general plentifulness of money everywhere, resulting from the disbursements of pay rolls at Fairmont, Monongah, Clarksburg, Parkersburg, Graf-

ton, Weston, Buckhannon, Pickens, Camden-on-Gauley, and other places. The developing of the various resources around these places mark the large amount of capital that has been invested in coal, timber, and other riches of the State. These plants are apparently engaged in a successful business, and employ many thousands of people as laborers, mechanics, and drawers of water, and hewers of wood. The results of these industries, through the capital employed, as well as money paid in purchase of minerals, timber, and other resources, are most advantageous to the section at large. And a better idea of the wonderful resources cannot be gained than from the fact, that notwithstanding the amount of capital now invested, that has rendered Central West Virginia comparatively easy, the development is just in its infancy. Millions of acres of timber, coal, and other minerals wait a proper investment of capital to render the people dis-interring them rich. On the whole, the region is in a remarkably easy pecuniary condition at present, with a brighter outlook still for the future.



CHAPTER XVIII.

Educational Facilities of Central West Virginia. — Systems of Schools.—Normal, and Common Schools.—Colleges.—General Remarks on the Subject.—Christian Privileges.—Social Status. Population of the Region. Probable Future of the Region.—

While the educational facilities of this section might be upon a higher plane as in most places, they are sufficient for all the ordinary purposes of life. In Parkersburg, Morgantown, Fairmount, Clarksburg, Grafton, Weston and Buckhannon, graded schools are located from which one can obtain the best branches of an English education, while at the University at Morgantown, and some others, classical studies are taught. The educational curriculum of this section is like that of the rest of West Virginia, composed of high schools, normal schools, graded schools, and common schools, at all of which the tuition is free—hence all come under the definition of free schools. It is only in the larger towns that the high schools are found, which are for the purpose of completing the education begun in the ordinary common schools. In this region there are several of these high schools: we find one at Fairmount, one at Parkersburg, one at Ravenswood, one at Clarksburg, one at Buckhannon, and one at Keyser. In these schools, a higher education may be obtained than at the common schools, and the languages, such as French, Latin, and German, may be learned. These institutions are of great advantage, and the laws of the State should be so arranged as that the districts should possess one to every certain number of districts.

Next to the high schools, the normal schools rank. These institutions have a curriculum of the usual higher English branches, Latin, French, and German. They are for the education of persons intending to teach. A good English education can be obtained at these schools, with knowledge of the languages we have named, if the student so desires. In this section

there are fine normal schools at Fairmount, Marion County, and one at Glenville in Gilmer, and other places. Here the teachers are prepared who expect to teach the common schools throughout the country. The graded schools rank next. These schools are generally found in small towns, and their virtue consists in grades being established where there is a sufficient number of scholars to justify it, so there can be more than one teacher. But the scholars of one district cannot attend the graded schools of another free of cost. A fairly liberal education may be obtained at these graded schools. If finished with a course at the higher, or normal schools, one would be fairly equipped educationally, for the ordinary duties of life. In most of the districts, and at all the towns, graded schools may be found which are conducted on the principle already named.

But by far the most popular mode of education in this region are the schools known as "common schools," taught by persons who are paid according to their certificates obtained on examination. These schools are located in the various districts, governed by a board of trustees, who administer the affairs and business of the schools, and attend to their finances, condition, and the like. These schools are usually well attended by the children of the district, who are taught the ordinary branches of English, such as grammar, reading, writing, spelling, geography, and arithmetic. If it was so arranged that the primary education thus obtained could be improved by a course through a graded, and then a high school in each district, the final mental equipment would be equal to the ordinary demands of life. One great trouble with reference to the common schools arises from the fact that the teachers are poorly paid, and some fill the position who can be scarcely deemed competent for the purpose. Some, however, are capable, and conscientious in the discharge of their arduous duties. (1) A few have been found

(1) In order that the system may be as explicit as possible, we submit an article from the pen of the accomplished writer, and teacher, Miss Annie L. Berry, of Braxton County, West Virginia;

"The West Virginia school system is, properly speaking, divided into three distinct classes, viz: Free schools, Normal schools, and Colleges. Free schools, being in reality the foundation of education, should receive first notice. It is in them the child gets the first notions, gathers the rudiments of learning, and, when later, he goes away to college, he always looks back to the days spent in the public school room as the time when the foundation for his character was really being formed. The free school system of West Virginia is not so good as it should be. It is sustained by a fund created by levying a

who are not only well educated, but highly cultured, with decided literary tastes.

In addition to the schools we have enumerated, there are several fine private schools, where the best scholastic education can be obtained, notably among which may be mentioned the Catholic school at Clarksburg, the seminary at Buchanan, and at Piedmont, Davis, and Keyser. At these private schools the most finished education can be obtained in a classical way.

tax on the property situate in each county. The amount of this 'Teachers' levy,' as it is termed, is fixed by the County Court, and is put at whatever they judge will be necessary to run the schools for the ensuing year. The county is, of course, divided into townships or districts, which are subdivided into subdistricts, and in each of these subdistricts is placed a school house. They usually are about one and one-half miles long and three-fourths mile wide. Each district is presided over by a body called the Board of Education, which body is composed of a president, secretary and two commissioners. Each subdistrict is under the care of a Board of Trustees, three in number. Of these three, it requires two to one to decide any matter. The Board of Trustees employs the teachers, and the Board of Education fixes their salary. The amount of salary differs in different counties, running from twenty-five to fifty dollars per month for teachers holding No. 1 certificates, and less for 2s and 3s. Before they can teach, teachers are required to attend a county institute for as much as five days, and to pass an examination on grammar, United States history, geography, arithmetic, general history, physiology, civil government, book-keeping, reading, penmanship, orthography and theory and art of teaching. To obtain a No. 1 certificate they must average ninety per cent., and not come lower than seventy-five per cent. on any branch. As was before remarked, the schools could be much improved if the teachers, County Superintendent, patrons, Trustees and Board of Education, would all work together for the common weal of the schools. But this they do not do. The law requires just so much of each school officer, and this he gets through with just as quickly as possible, and gets it off his mind. Then, too, the salaries are so poor as to discourage teachers. They merely teach as a stepping stone to something better not fitting themselves properly for teaching, for the simple reason that they cannot afford to do it, for what they receive for teaching. The County Superintendent is an officer who oversees all the schools in the county, and the State Superintendent oversees all the schools in the State. The county institutes are conducted on the following plan: The teachers meet with the County Superintendent, and one or more institute instructors, and proceed according to a programme laid down by the State Superintendent, and consists of a course of lectures in the common school branches and one or more evening sessions devoted to readings, recitations, &c. They are certainly not so interesting, and instructing, as they might be made if every one who is, or should be, interested in the cause of education, did all they could to make them instructive. Free schools are the foundation of one's character in more ways than one. The pupil, it may be unconsciously, but none the less surely, grows to imitate the teacher in voice, manner, and in fact, in almost every one of their most prominent characteristics. The normal schools of West Virginia, six in number, are so distributed as to be in reach of all persons

One reason that educational features have improved so much in this region in the past few years results from the wonderful development that has taken place by an influx of capital. Prior to that time, the taxable values were small; now, they have increased, and doubtless will continue to do so, making the educational advantages improve annually. Wise legislation should be had on the subject, now that the means are in view, and let the noble work of educating the youth of the country proceed. Parents should be careful to see that their children attend regularly, and obtain the advantages offered by the State in the way of acquisition of knowledge. Individually, knowledge is the strongest weapon in the world except goodness. And it is incumbent on every one to obtain it as far as possible. The educational facilities in this section may be said to be fair.

Christian privileges are ample in the region, in every sense of the word. All the Christian denominations are represented: Roman Catholic, Episcopalian, Presbyterian, Lutheran, Methodist, Baptist, Christian, and others. Houses of public worship are ample, where divine services are held, and Sunday Schools open for the younger portion of the community. There can be no doubt of the fact, that among many of the people of this section there is a rugged morality, by no means harmful, and through Christian teaching most of the people are members of some denomination which they support.

When we come to speak of the social status of this region, it must be understood that everything written is based on oppor-

residing in the State. They are kept up by a State fund, created from a levy of ten cents on each one hundred dollars valuation, and a tax of one dollar on each male resident over two years of age. The teachers consist of a principal, and as many assistants as the school requires, usually from two to four. They are appointed by a Board of Regents, who have, also, in charge, the school building and grounds. They are appointed by the Governor. The educational facilities of the normal schools are very good indeed as preparatory schools. The courses of study embrace: a business course, a musical course, a literary course, &c., &c., and rather comprehensive than otherwise. Under this head of normal schools might be embraced the lowest order of graded schools, commonly known as "summer normals," and other names to distinguish them from the State normals. They are gotten up on a primitive style and kept going by a primitive, and sometimes imaginary, fund. Still they are beneficial to any community in which they are situated. Many persons claim them to be really better than the State normals. As to college, but little can be said. There are some institutions for unfortunates, one located at Romney, for deaf, dumb and blind, and there is a college for negroes, and some other colleges. Taken altogether, the school facilities of West Virginia are very good indeed. But few States have better."

tunity as a foundation stone. Whatever may be the moral texture of a people, and however true to principles they may live, they must have opportunity to cultivate the amenities of life. The social proclivities of a people may be good, yet the chances wanting for the cultivation of the higher tastes, and arts with reference to a high plane of literature, and the fine arts. The inhabitants of this region are by no means unsocial, or inhospitable. They have decidedly good social qualities, and in many instances are refined, and invariably have a healthy tone of morality. In many of the towns of the country, and in rural districts some people are found who are as capable of filling a high social position as any we could enumerate. And as a rule they are universally kind.

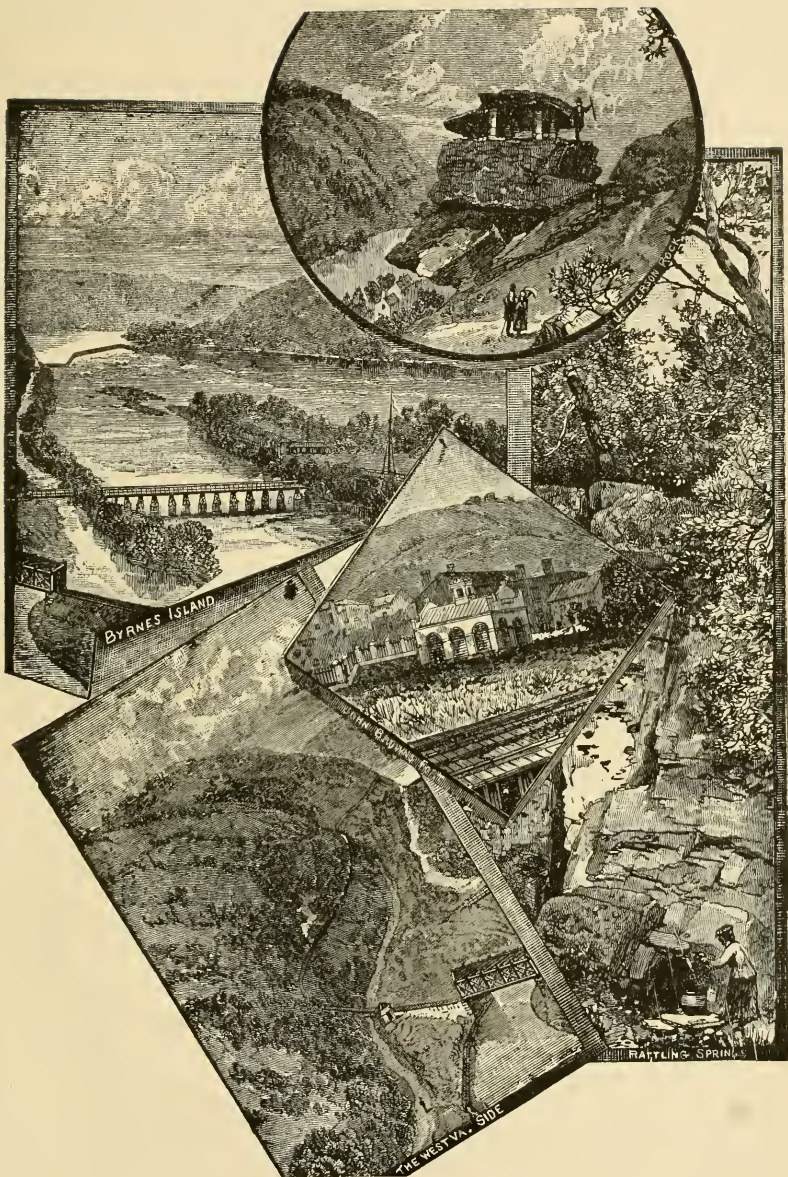
Taking the population as a whole, it includes two classes: the native West Virginian, and the foreigner who has cast his lot in the State as a permanent resident. As we have intimated hitherto, the native West Virginians are composed in a manner of the descendants of two different set of people. The northern part of Central West Virginia was originally settled by people from Pennsylvania, and Ohio, while the southern portion of the same region was peopled by Virginians, and their descendants, who invaded the wilderness west of the Alleghany Mountains. These people differed materially in manners, tastes, and customs—so much so, that in the late civil conflict, their descendants were often arrayed against each other. In some of the counties, it was not an unfrequent occurrence for the two opposing armies to each possess a company of soldiers from the same county. And even to this day, this difference we have mentioned, has prevented that genial, close-knitted fellowship between man and man, that we see in other communities. The inhabitants of the region have been often regarded as a clannish, inhospitable people. This opinion is erroneous. While the natives are, as a class in manners, a race peculiar unto themselves, no more hospitable people can be found after they know you. But while most people are pleasant, and hospitable to the stranger until they find he is not worthy of the treatment, the people of this region must know a man before any of the amenities of life are extended. And this is but natural. Cut off from intercourse with the outward world by reason of want of proper communications, they are unaccustomed to strangers in many parts of the section. They eye the newcomer with a large amount of suspicion, that is never dispelled until it is disarmed

by the foreigner's becoming more or less a part of themselves by continued residence. They naturally regard the stranger as legitimate prey, when his interests conflict with their own, and it is a rare thing that a West Virginian is hurt in anyway by this conflict of interests. However innocent they may appear of the hustling ways of the world, they are sharp and shrewd. It is further stated by many that the native West Virginian is opposed to development. He is not opposed to it—he is unaccustomed to it. It is human nature to go slowly in anything to which we are unaccustomed. Nearly all the inhabitants of Lewis, Braxton, Webster, and Nicholas, knew nothing of the outer world up to a few years ago, when the West Virginia and Pittsburg Railroad put them in immediate communication with it. It could not be expected that they should encourage and support the spirit of progress all at once, when progression to them, in the sense it was known to the stranger coming in their gates, was simply an undemonstrated rule. This spirit of "standing where our fathers stood," is relegated to the past when they learn the advantages of material progress, and improvement, and the rapid development in many parts of the country is evidence of the fact. It is to be hoped that the spirit of progress in the future will play just as important a part with the native-born West Virginian of this region, as it does with the thrifty citizens of sister States.

The foreigner who has become a native of West Virginia by adoption, comprises a large percentage of the rapid increase in the population of Central West Virginia. The vast resources in coal and oil especially, have invited capital, which has been the means of development. Manufacturing interests have sprung up in many places, and this movement of progress has caused a large influx of population throughout Central West Virginia. This class may be said to be a fair average of the American citizen coming from Pennsylvania, Maryland, Virginia and Ohio. It is easily seen, that the development of this region is merely in its infancy, and the future increase in the percentage of immigration is to be infinitely larger than the past. By intermarriage, intercourse, and association, the population of this section of country will eventually be equal to that of any State in the Union.

By a retrospective glance of the resources of this section faintly portrayed, it can be easily seen that it is just in its

infancy. The vast wealth in timber, that has barely been touched as yet, has occupied the attention of investors, and capitalists, since the construction of the West Virginia and Pittsburg Railroad, and the West Virginia Central Line. The rich banks of coal, the immense leads of iron, and deposits of clays, sands, and other minerals, are as yet untouched in the section. Of all the vast regions of the South and West, of which there are many possessing possibilities untold, Central West Virginia stands out in bold relief, second to none. Many investors have accumulated fortunes, while the working man has more than earned a living. There is a field here that offers rare advantages to all who desire to do well. To sum up the probably future of this region is scarcely a difficult matter if from the past an insight into the future may be gained. During the past ten years West Virginia has led every State in the Union in material progress. In this particular region, the northern edge of the region has been partially touched, while the middle and southern portions lie in their native wealth. Wirt, Calhoun, Gilmer, Roane, Clay, Nicholas, Pocahontas, and a part of Webster and Randolph, have never been penetrated by railway facilities. In those counties the primeval forests have never heard the echo of the woodman's axe to furnish material for the hand and gang saws; the vast deposits of minerals, such as coal, iron, clays, and stones, lie embedded in their native state undisturbed by the pick or drill. These must yield their tribute for the wants of man, giving this section possibilities in the future not possessed by any other region we can name. And in concluding, it is our pleasure—it becomes our duty to state, that the section of which we have been writing, with its scenery, climate, vast resources, and transportation facilities, must, in the future, become by far the richest of any we can name, and that, too, from an immigration purely American, to bring forth the wealth that lies on its surface, and is embedded within the bosom of the earth.



CITIES AND TOWNS

—IN—

CENTRAL WEST VIRGINIA.

As a natural sequence of events to the wonderful development of Central West Virginia within the past ten years, many cities and towns have sprung into active existence. Without some notice of these any work on the country would be incomplete. It is not within the scope of this work to touch upon every village, nor to follow in detail the history of each place: the time and space, as well as proper historical material is wanting; but it is within the proper jurisdiction of the author to give such an account of the principal towns as will enable the reader to visit them as points of business, and places of residence. The cities and towns which should occupy a space in the work may be named as follows: Parkersburg, Clarksburg, Weston, Buckhannon, Sutton, Camden-on-Gauley, Pickens, Piedmont, Bayard, Davis, Hendricks, and Elkins. There are other towns that might be mentioned, but those adverted to here, on account of location, resources, and other advantages, are sure to increase quite rapidly as time passes. In the treatment of these, the utmost impartiality will be used, and neither person nor place mentioned that is not in some way connected with the general progress and development of the country.

THE AUTHOR.

CHAPTER XIX.

Parkersburg—Location and Situation of the City.—Its Position as a Commercial Centre.—Manufacturing Interests.—Pecuniary Facilities.—Educational Features.—Population.—Social Status of the Place.

Parkersburg, located in the western borders of Wood County, is the second city of importance within the limits of the State of West Virginia. It is situated between the junction of the Ohio and Little Kanawha Rivers, reaping from this location fine water advantages, that have played no small part in the growth and improvement of the place. From the year 1750, when the place was a struggling hamlet, and took its name from one Parker, who originally owned the land around, until the present day, Parkersburg has gradually grown from a mere village to a thriving city through its commercial position, and manufacturing industries. Before railroads superseded to a large extent water transportation, all important towns were located on the Ohio River in West Virginia. The contact with the outer world which arose by reason of this water transportation, caused Parkersburg to grow, and like Pomeroy, Mason City, and Huntington, to become a place of some importance. For many years, all the trade from the back country centred at Parkersburg, which was in constant communication with Cincinnati, Pittsburg, and Wheeling, by means of the Ohio River. Add to this fact, the further one, that Parkersburg was made the county seat of Wood, and we have the foundation of its prosperity. Through these reasons the town gradually improved until the year 1852, when the construction of the Parkersburg Branch of the Baltimore and Ohio Railroad from Grafton, West Virginia, to this point, opened a new era for the town. (1)

(1) At the time the Baltimore and Ohio was constructed to Parkersburg, the town had some three thousand inhabitants, and was growing gradually, increasing at the rate of some one hundred people per annum. The ground where the Court House now stands, was presented by the "Parker family," to the town, and the buildings subsequently erected on the lot. The original inhabitants of the place immigrated mostly from Pennsylvania, and the North.

The town became a divisional terminus of the Baltimore and Ohio Railway Company, where shops, round houses, and so forth, were erected. During the period from 1853 to 1860, the first discoveries of oil were made in the "volcano uplift," east of Parkersburg, and refineries began to be located at this point. The number of operatives necessary to run these works came in, and merchants followed in train to supply their wants. Other manufacturing industries followed, and the place steadily improved until at the present time it has some fourteen thousand people, with a steady increase.

Parkersburg was happily located with reference to commercial prosperity. Directly situated on the banks of the Ohio, and Little Kanawha Rivers, it possessed Northern, Southern, Eastern, and Western outlets. The place became early a central point for the manufacture of lumber, and building materials for these reasons: The Little Kanawha River furnished means of transportation for logs that were floated down the river to Parkersburg from the interior counties of West Virginia, and at this point manufactured into lumber. Plants for dressing and moulding the same were established, and the Ohio River conveyed the manufactured product North and South. The advent of the Baltimore and Ohio gave the town a Northern market, and its increase in material prosperity and inhabitants soon caused it to grow from a town into a city.

From commercial importance to manufacturing interests is but a step. Parkersburg took it quite early, and soon had established within her borders a good list of manufacturing industries that gave employment to a large number of people. At present, her manufacturing plants consist of oil refineries, machine shops, foundries, flouring mills, tanneries, paper and pulp factories, furniture factories, and wire-nail machine works, (2) These plants employ a large number of workingmen, who reside in Parkersburg, and have their homes here.

(2) It is but natural that we should be grateful to any one who by his genius and thought, has turned his talents to the use of man. It is not generally known yet it is a fact, that the most useful inventions for the manufacture of wire nails were first discovered by a resident of Parkersburg. We allude to the machines for making the nails. Some of the best of these were made, and patented by Mr. John B. Hastings, who has since become famous in the United States and Canada through his discovery of a process for manufacturing the pig made from the phosphorous iron ores of the South into steel, without the expense of the process now used. This latter discovery of Mr. Hastings deserves more than passing notice, as it will eventually revolutionize the

From a commercial and manufacturing centre of no mean importance, Parkersburg has grown to quite a railroad point. In the means of transportation, it is peculiarly situated. The national Baltimore and Ohio System runs through the place, giving it fine Eastern and Western markets. The Ohio River Railroad, extending from Wheeling to Huntington, gives the city direct communication with Pittsburg North, and Huntington South. The Ohio River offers a sharp mode of competition in the way of transportation, while the Little Kanawha is a sure avenue for a variety of products from interior counties, especially timber. No place that we can name in the Southwest is in quicker communication with the cities of importance than Parkersburg. This fact enables it to sustain handsome relations with the outside world in the way of business. It is the shipping and trading point too, of many of the surrounding counties which gives it increased commercial relations with the East and West. Large shipping interests exist here both by rail and water.

The logical result of its commercial and manufacturing interests, is its financial stability. No place that we can name is upon a better footing financially than this city. The city government is careful and prudent, stemming the place free from financial breakers; the banks are in a good state, furnishing ample capital for the business of the place, as well as much money to surrounding places. During the late stringency, they paid promptly all depositors in currency, exhibiting the financial soundness shown by the banking system generally of West Virginia. The city possesses a fine electric plant, has natural gas, owns a city railway, and gas works. (3) It is in a healthy, growing state, that we like to see, and has a wonderful material prosperity before it.

present processes of converting iron into steel. By means of the mixture of certain chemicals with the pig when in the converter a steel is produced, that can be tempered to suit different purposes. Various products, made by Mr. Hastings, such as plow-points, tools, and car wheels, stood the most crucial tests, giving every evidence of their superiority over the product made from the old methods. Of course, Mr. Hastings' process has been opposed. That is but natural. Whatever is intended to revolutionize well-known methods of procedure is invariably bitterly opposed at first. So with this process. But its ultimate success is conceded by every man of thought, who has been so fortunate as to watch one of the tests. Mr. Hastings' knowledge of steel, and iron is something wonderful, and to him we are indebted for more than one important invention.

Educational facilities in Parkersburg are unusually good. High schools, graded, common, and private ones abound on every side, giving the young people ample opportunities for the acquisition of that highest accomplishment, and most powerful weapon—knowledge. (4) The result is, the young people of Parkersburg are unusually intelligent, and make fine material for social purposes. The school buildings of the place are some of them, models of handsome architecture, that embellish the city greatly. The city possesses some very handsome buildings, notably among which, is the United States structure where the Postoffice is located.

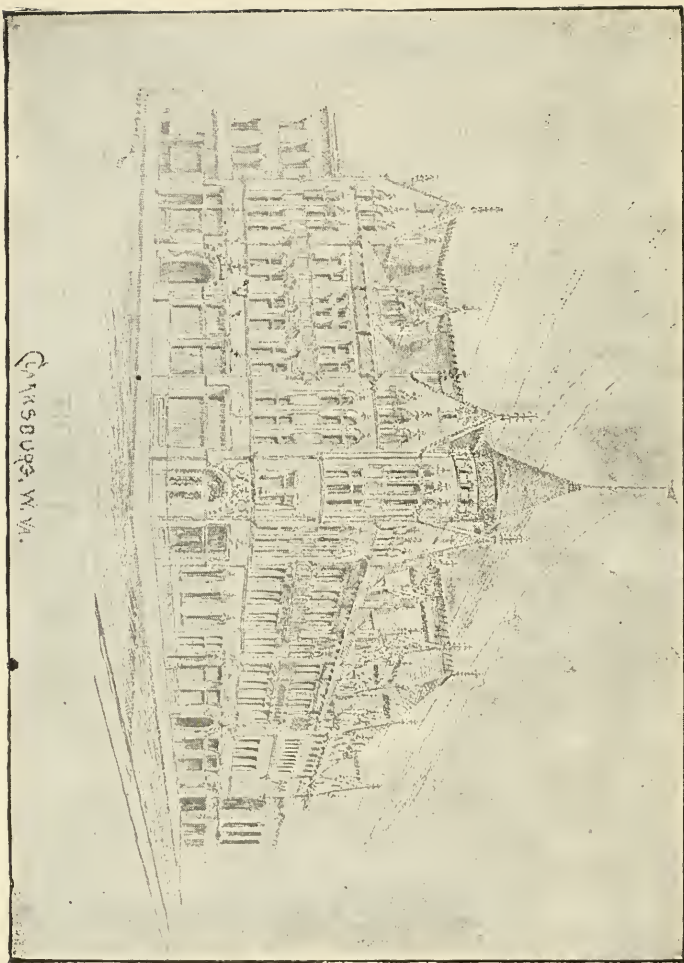
The population of this place cannot be correctly gathered from the census taken. Many persons reside outside the corporate limits, and do business in town. By a careful computation, the number of inhabitants may be said to be some 14,000 people. These people are kind, hospitable, and intelligent, making a social status of the most pleasant kind. In many respects, the inhabitants are superior, and in all the broad domain of the southern land, it is hard to find a more pleasant place of residence than Parkersburg, or one in which life is spent more easily, and delightfully. For all classes, and conditions of life, the place seems eminently fitted. (5) And it is but just to say, that while Parkersburg has become quite a city for the section of country in which it is located, still, there is lacking among a part of the citizens public spirit to a certain extent. They do not fully appreciate the force and virtue of encouraging and supporting industrial movements beneficial in building a city. Adorned with a sufficiency of this spirit of improvement, Parkersburg would naturally increase in size and importance, until it would soon rival Wheeling in every way.

(3) The *modus operandi* of the city railway could be wonderfully improved by relegating the horse cars to the days of the past, and having cable or electricity in their stead. There is a move afoot at this time to accomplish the feat, and we think a successful one.

(4) Too much stress cannot be placed upon the importance of parents requiring their children to attend school. Except goodness, knowledge is the most formidable weapon with which we can be armed to fight the battle of life. Before its immediate power, that of riches, position, social eclat, and politics, melts away like snowflakes beneath the genial rays of a summer's sun.

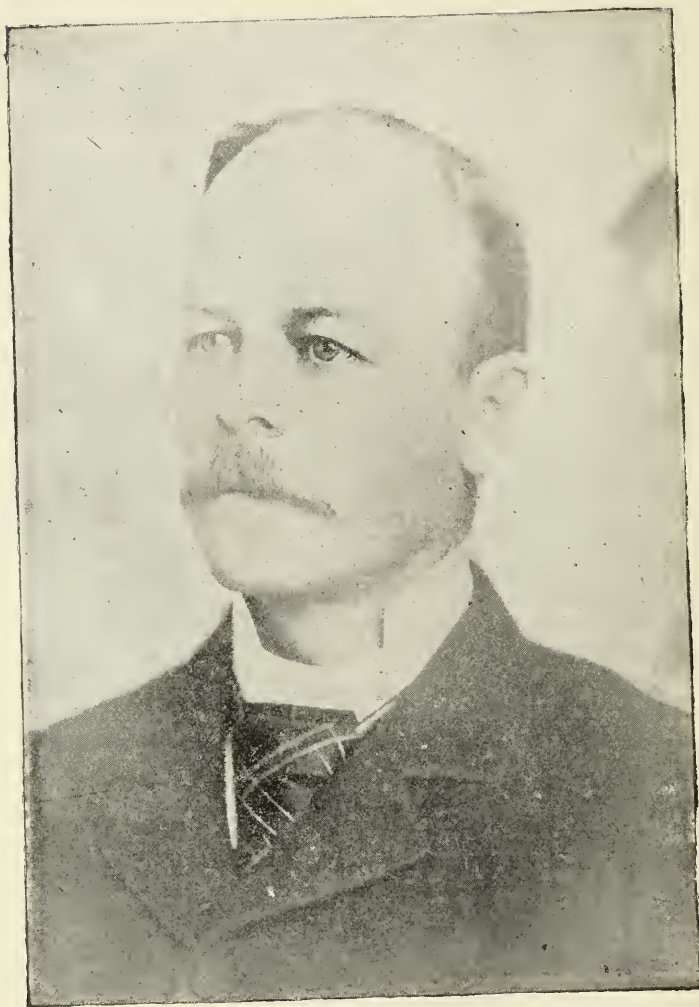
(5) Parkersburg has been, and is the residence of some prominent people. Ex-Governor Jackson, a lawyer of unquestionable talent was a resident of the place up to his death. Senator Johnson N. Camden resides there. Judge John J. Jackson, well-known throughout the State, has lived there for years. Geo. W. Thompson, a brother of W. P. Thompson, the shrewdest financier in the section, and President of the Ohio River Railroad, makes this city his home. John B. Hastings, the inventor, is a familiar figure upon the streets, while others we have not the space to name live there. All of these men are well-known beyond the borders of the State, and enjoy an enviable reputation at home as well as abroad, being both praised and abused, the unerring concomitants of greatness.





CLARKSBURG, W. VA.

Traders' National Bank Building, Clarksburg, W. Va.



COL. T. M. JACKSON,
Ex-Professor of Civil Engineering, University of West Virginia.

CHAPTER XX.

Clarksburg.—Its Favorable Location for a Large City.—Country Surrounding it.—Agricultural and Mineral Wealth.—Transportation Facilities.—Cause of Clarksburg's Want of Growth.—Antagonistic Spirit Against Improvement Decreasing.—Thomas Moore Jackson.—R. T. Lowmudes.—Future of the Place.

If the God of Nature were to ask the Goddess of Prosperity, which was the best locality for a large city in all the broad domain of Central West Virginia, she would answer:

“Where Clarksburg is situated?”

This town, located in Harrison County, West Virginia, lies in nature's garden, nestling beautifully in a rolling vale on the banks of the West Fork River. The town is over one hundred years old, and is the spot where some of the earliest inhabitants pitched their tents, while the Simpson Brothers were wandering along the banks of the Buckhannon River, in search of adventure and game. The beauty of the spot, coupled with the wealth of the surrounding country, attracted settlers until early in the eighteenth century, when it was quite a village. When Harrison County was cut off from its parent stem, Clarksburg fell heir to the county seat, an inheritance that invariably enriched a place more or less in earlier days. Clarksburg grew slowly, being settled mostly by people who were descendants of the early pioneers, and they married, and intermarried, and accumulated property around them, until the inhabitants of the place became a “set peculiar unto themselves.” and at this day retain much of the “old fossil odor,” that is a thing of the past in this progressing generation of people marking our present epoch. Slowly the town grew, supported by the country around, and a few manufacturing industries, until it has become a place of large private wealth, and some four thousand people.

That the location of Clarksburg for a large city is a most suitable one, is undeniably true. Situated in the heart of

Harrison, one of the richest counties naturally, in West Virginia, it is surrounded by a magnificent territory. The perfect limestone of the Carboniferous era is fully developed here, rendering the soil succulent, and productive. Wheat, corn, and oats grow abundantly around, while hay and bluegrass spring up indigenously on the lovely surrounding hills, and in the valleys, responding generously to the kisses showered upon their surface by a generous and loving nature. The scenery is grand, exquisite, and inviting, while the climate is perfect. Rich mineral deposits, of every description known to the geological structure of the Devonian, and Carboniferous rocks abound here: limestone, marble, iron, coal, natural gas, clays, and oil surround it in prodigal profusion. And the stranger viewing the place, wonders why it has not increased. The geographical position, rich resources, and natural wealth, have forced Clarksburg to be a town against the most astounding odds: the wishes, efforts, and desires of its inhabitants to have it grow a single inch, or improve in any mode whatever, so far as the *past* is concerned.

In the first place, the wealth of Clarksburg has always rested in the hands of old, settled citizens, whose idea of life consisted in training as their father's did, and the further conviction that "all ways" except their's were wrong! All spirit of improvement was looked upon as of a radical nature, not to be tolerated. Closed in from the outside world, they imagined Clarksburg was an elysium of an earthly paradise kept sacred for a few, the entry into which was not to be borne, if made by the "ungodly stranger!" And they further believed if he was allowed to enter at all, the privilege was one he should pay for, however much the benefit might be, from the undertaking he brought in. (1) Though fully sensible of their wonderful resources, and blessed with the means of developing them, these people seemed to think it their privilege to hoard their savings; and the duty of the outside world to not only develop those resources, but pay them for doing so! But the outside world is no fool! Clarksburg has stood at the same thing for fifty years through the predominance of this spirit, (2) and grown only from a combination of fortuitous circumstances, beyond the

(1) It is a well known fact that numerous industries in days gone by would have been located at Clarksburg, but for the exorbitant price of ground demanded by the citizens, and the antagonistic spirit exhibited by the majority against any improvement whatever.

control of human ingenuity to check. And the same circumstances will make Clarksburg yet, the largest city in West Virginia.

But of late days, a new spirit has taken possession of the younger men. The place is beginning to move. (3) They are recognizing in a proper way the advantages surrounding their town, and are inviting capital, and manufacturing interests within their midst. For the reasons we have named, they will succeed; for, such riches, and resources as surround Clarksburg will eventually be developed by the inexorable law of supply and demand. The town possesses some good manufacturing industries now, that consist of: three foundries, machine shops, tannery, flour mills, planing mills, woolen mills, marble works, and electric plant. One cause of the growth of Clarksburg to its present limits is accounted for by the fact that it is finely situated with reference to railway facilities. The Baltimore and Ohio runs east and west through the place; the Monogahela runs into the town; the place is the terminus of the West Virginia and Pittsburg Railway, and several prospective lines centre here. No place in the South possesses so many advantages to found a large city, as the one of which we are now writing.

Clarksburg is the centre of the best financial régime in this country for a plentiful supply of money, and solidity of pecuniary foundation. Its banks are well managed, and conducted, and have a fine surplus of capital. The people are generally in good financial circumstances, and the town is a source of pecuniary supply to many of the surrounding places. In fact, it possesses a surplus of capital that might be handsomely em-

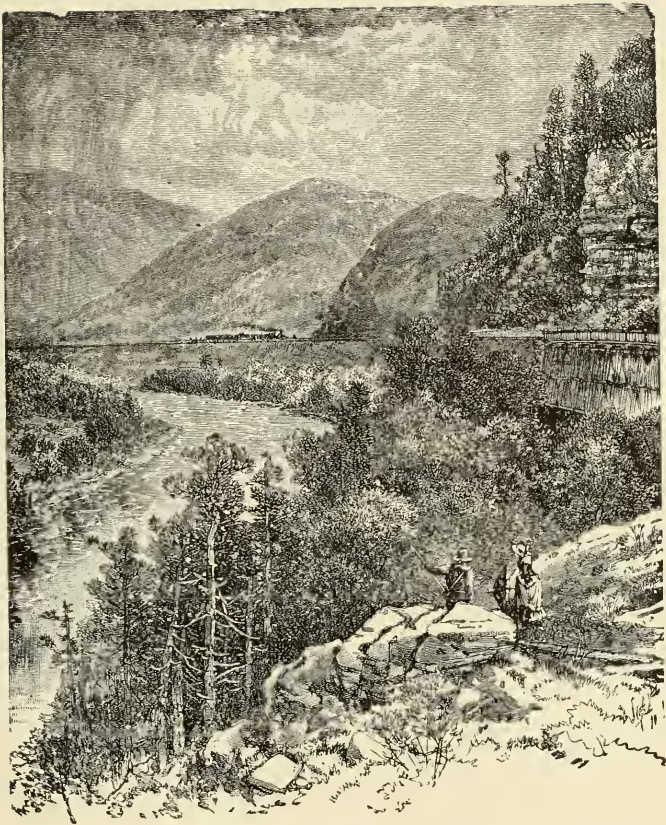
(3) There is no person in Clarksburg to whom greater credit is due for the progress made by the town than Mr. T. Moore Jackson, formerly Professor of Civil Engineering in the University at Morgantown, and a gentleman to whom we have already alluded. Mr. Jackson has been a prominent figure in his State in the development of the oil fields, and coal interests, and has devoted much time and thought to the progress of West Virginia in a material way. And now he is turning his attention to Clarksburg. It is through his efforts that the handsome block of buildings are now being constructed that comprise a bank, hotel, opera house, and stores. Mr. R. T. Lowndes, too, is devoting his energies to the growth of the place, and is erecting through his influence a large block of buildings. He is also President of the West Virginia and Pennsylvania Railroad. Through the united effort of these gentlemen, and a healthy spirit of competition, Clarksburg has at last begun a move towards improvement, that should have started forty years ago.

ployed in more ways than one, and the outlook now is that it will be employed in the future.

Educational facilities here are exceptionally fine, the town possessing colleges, high, and graded schools, and a fine Catholic institution. It would be difficult to find a more intelligent, and intellectual class of people than those of this place, because the people believe in education. Christian privileges abound on all hands, and Divine worship is well supported and attended. The social status is exceptionally good, and culture, and refinement are the rule. (4)

For the reasons we have named, Clarksburg must some day become a place of considerable size. Manufacturing industries will seek so favorable a location, where the raw material exists in abundance, and railway facilities are at hand. The town has a remarkable future before it, which if properly handled, will soon develop it into a city of no small dimensions. The only question as to Clarksburg's future, is one of time, since the place is located admirably with reference to resources, transportation facilities, and those surroundings that usually go to build up a city. As a place of residence, it is most superior in every way.

(4) Clarksburg is the home of some of the most cultured and refined people in the State of West Virginia. Many prominent men have lived there, and are still residents of the place. Judge Nathan Goff, Judge of United States District Court, T. Moore Jackson, ex-Professor of Civil Engineering at the University of Virginia, R. T. Lowndes, President West Virginia and Pennsylvania Railroad, Jasper Y. Moore, Clerk United States Court, Mr. Basil, Attorney for the Baltimore and Ohio Railroad, Mr. Haymond, Clerk of Court, and a *litterateur* of uncommon ability, are residents of Clarksburg. These gentlemen, with their charming families, compose a cultured and social set, representing the acme of what is pleasant, and charming. Mr. Haymond is now engaged in preparing a history of Harrison County, which will be a success, when we consider his ability, and rare historical knowledge.



Mountain Scene near Fairmont.

CHAPTER XXI.

Fairmont.—County Seat of Marion.—Location, and Situation. Manufacturing Industries.—Commercial and Financial Aspect.—Population of the Town.—General Remarks.

Fairmont, the county seat of Marion, lies on the banks of the Monongahela River, and for its size, is by far one of the most prosperous towns in this section of country. Marion County, justly bearing the reputation of being one of the richest coal counties in West Virginia, fairly bristles with coal mines around Fairmont, which doubtless have been the primary cause of the growth of this place. The main seam of Pittsburg coal lies around the town, which raw material, coupled with the transportation facilities, have been the elements of success on which the place is founded. The town lies on the Main Stem of the Baltimore and Ohio Railroad, and since the completion of the extension of this line to Uniontown, Pa., new things are in store for Fairmont.

The vast mineral deposits of coal, glass sand, clays, and ore around Fairmont has already made it a place of no small importance in a manufacturing way. Here we have the following manufacturing industries: a flouring mill, two planing mills, carriage and wagon factory, electric light plant, and magnificent glass works. The latter is one of the prettiest industries of its kind in West Virginia, employing an energetic skilled class of mechanics. The coal works around, at Monongah, and other places, affect this place most favorably. Nearly all the employees reside here, and many own their homes in the place. The business men of Fairmont are always alive to the interests of the town, rarely failing to increase its prosperity whenever the opportunity occurs. (1) The people at large have organized a

(1) Among the residents of this place, none have done more for the material prosperity of the town, and section, than ex-Governor Fleming. So well known is Governor Fleming, that it is barely sufficient to name him to convey to the reader exactly who he is, on account of his enviable notoriety as a politician. He has become largely interested in the resources of Central

corporation known as the "Fairmont Development Company," that has succeeded wonderfully in developing the town. (2) Too much credit cannot be given a move of this kind, when it is conducted in a prudent, careful, and conservative manner as this is carried on.

The result of these industries, with the coal works around Fairmont, has been, to put the place on an unusually good mercantile and financial footing. The mercantile trade is as good as that of any place we can name, while banking facilities are ample and sufficient for every purpose. The place has one of the best hotels in the State, and many other advantages we could name. (3)

The population of Fairmont at present numbers some four thousand people, and is composed of the best make-up in the way of population in the State. Educational facilities are unusually fine here, there being normal schools in addition to the graded and common ones.

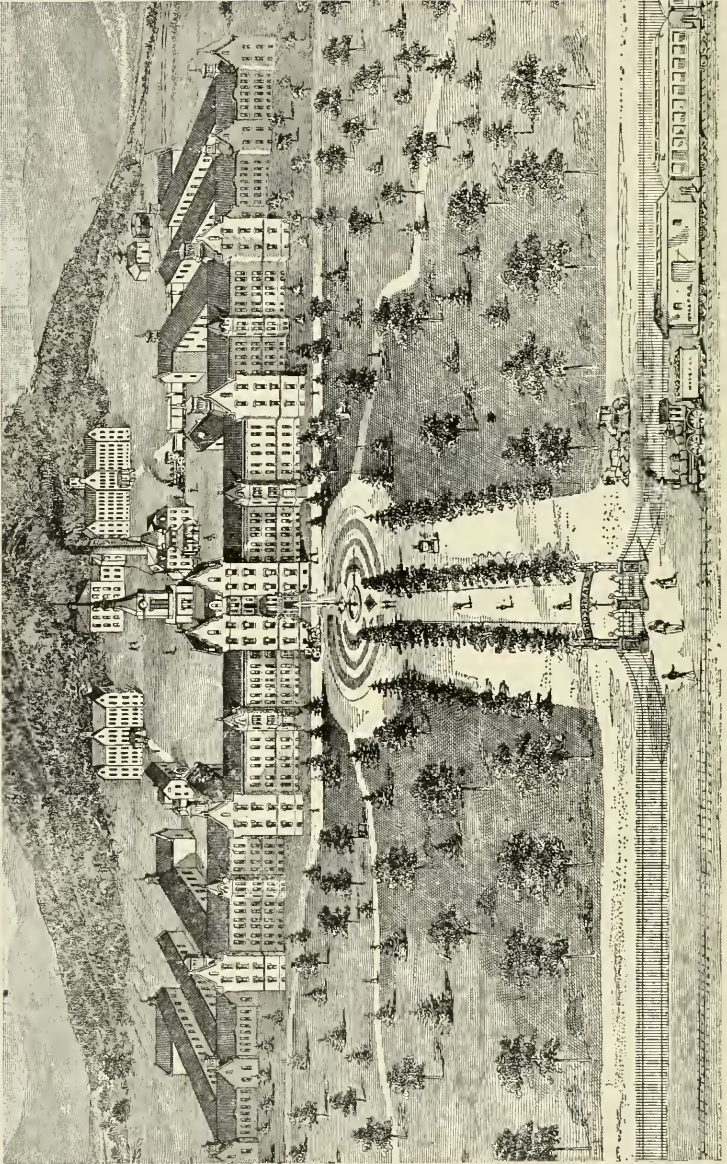
From its location, and situation, with its transportation facilities, Fairmont has the brightest outlook before it. (4)

West Virginia, and no one has done more for its advancement in a material way than he. He has studied, written, and lectured upon the subject, both at home and abroad, and to him the State at large is deeply indebted. He now resides at Fairmont, in which he takes the keenest zest and interest.

(2) The organization of the Fairmont Development Company, was one that is a credit to the town and country. The object of the concern is to offer inducements in the way of sites, &c., to industries that would locate there. This move has been the cause of more than one plant being located at Fairmont, and has within its means liberal offers to industries desiring to locate. But few places offer superior advantages than those given by Fairmont to industrial plants.

(3) The bridge crossing the yawning chasm at Fairmont, connecting the town, is a marvel in height.

(4) In addition to the Baltimore and Ohio Railroad, Fairmont has the Monongahela River Railroad, which runs from Clarksburg to this point.

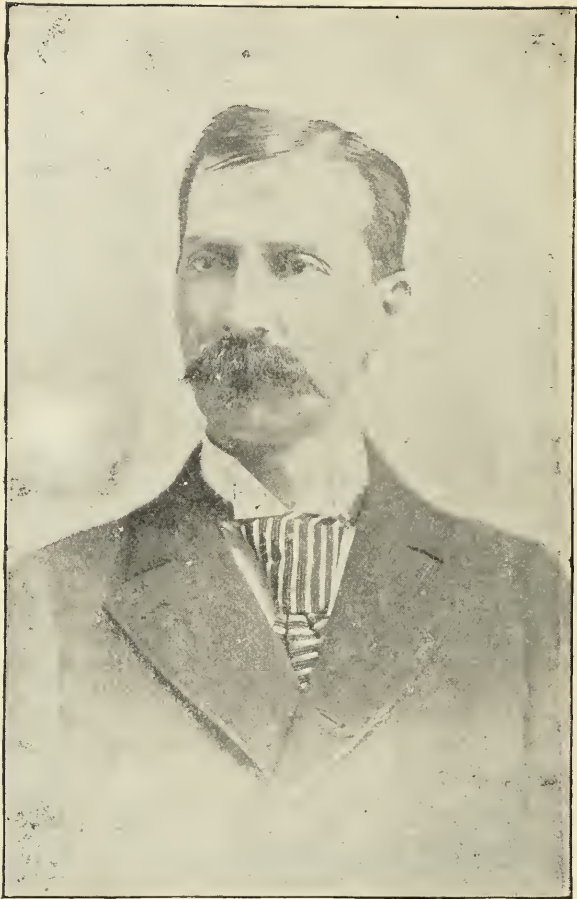


CHAPTER XXII.

Weston.—County Seat of Lewis.—Situation and Surroundings of the Town.—Insane Asylum.—Central Point of West Virginia and Pittsburg Railroad Company.—Merchantile and Financial Aspect.—Manufacturing Industries.—Educational and Social Sphere of the Town.—Prominent People.

Weston, pleasantly located on the banks of West Fork River, in Lewis County, is one of the oldest towns in this section of the State. In the 18th century, when the early pioneer was marking off settlements, Weston took its beginning, and was first named Fleshersville, after one Flesher, who gave the ground to the town when the first county buildings were erected. Afterwards, it was made the county seat of Lewis, and its name changed to "Weston," on account of its location. Like most of the county seats, it became a centre of trade, until some four or five hundred souls were congregated together. It was due to the enterprise of the citizens of this town that the West Virginia and Pittsburg Railroad was first begun, and the narrow gauge road that was afterwards completed, is still fresh within the minds of the people. The location of the town so far as country goes is an admirable one. Situated in a lovely valley of the spurs of the Alleghany Mountains, surrounded by rolling ridges, it occupies the best agricultural region in Lewis, that is equal to that of any county we can name. Its location, coupled with several fortuitous circumstances, which we shall detail, has made it one of the brightest points for business and residence in this section of West Virginia.

One of these fortunate occurrences that helped to make Weston was the location here of the Asylum for the Insane. This institution lies on the western edge of town, and on account of its spacious structure, and imposing grounds, is a thing of beauty as well as use to the town. Here, numbers of patients are confined, from all points of the State, and the support rendered by the State, in equipping, and maintaining it, places



DOCTOR A. H. KUNST,

Of Weston, W. Va., late Assistant Superintendent of Asylum for Insane at
Weston, now Vice-President and General Manager of the West Virginia
and Pittsburg Railroad.

thousands of dollars in the town of Weston. The building is constructed out of the pretty blue sandstone we have already mentioned, and is one of the most beautiful structures in the State. It is admirably managed, and is homelike, and comfortable in every way. (1) It was an entering wedge in Weston's growth from the time of its location.

But the building and construction of the narrow gauge system, from Clarksburg to Weston, and subsequently extended to Buckhannon, gave Weston a wonderful impetus forward. This point was made the central offices of the road, and afterwards, when the gauge was changed from a narrow to a broad one, and the line extended from this point to Sutton, in Braxton County, and Camden-on-Gauley, in Webster, the place felt the extension, and grew accordingly, until the town has some twenty-five hundred people, and has become quite a commercial centre. Here, the main offices, and repair shops of the West Virginia and Pittsburg Railroad are located, giving employment to quite a number of people residing here. This has brought merchants, mechanics, and pecuniary institutions, which make the place a thriving business centre. Several large manufacturing industries are here, principally among which may be named: a foundry, and machine shops, woolen mills, creamery, furniture factory, two flour mills, saw mill, and planing mill. These are in a safe, flourishing condition, making good the assertion that this point would be an admirable place for the location of either iron, or wood-working plants, (2) Profitable investments could be made in either one or the other, on account of transportation facilities, and propinquity of the raw material, coal, timber, and iron.

As a place of residence, Weston can be heartily endorsed for the average person. Scholastic advantages are remarkably good.

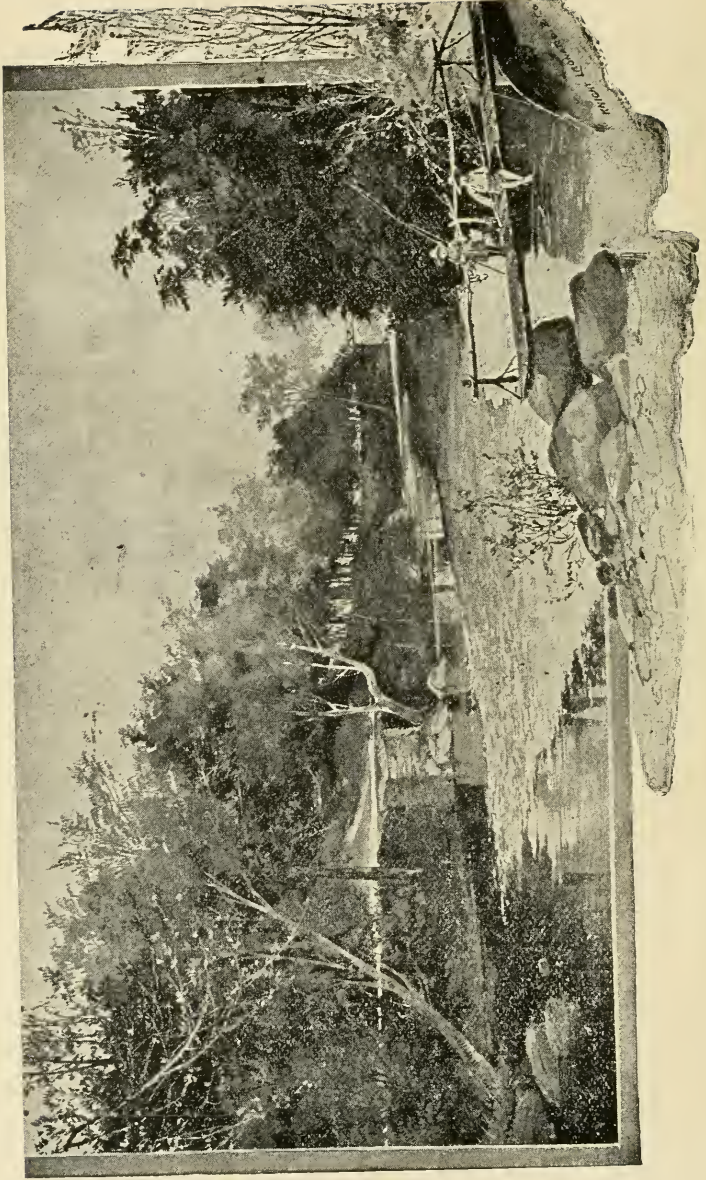
(1) At present, the asylum is under the charge of Dr. Crumbecker from Ohio. His knowledge and experience in the case of such institutions are great, which, combined with firmness and kindness, makes him admirably fitted for the government of such an institution.

(2) On the extension of the West Virginia and Pittsburg Railroad toward Braxton and Webster, large timber forests are in existence, comprising every variety of hardwood. Near the town, north, are the Mount Clare coal fields, that could furnish large quantities of coal. The iron ore fields of Braxton are near by, and the propinquity of all this raw material gives an idea of the suitability of Weston as a manufacturing centre. We can name no better place.

The town has both graded and common schools, that offer good educational facilities for the young. The place has a remarkably fine set of business people, among whom are some persons of unusual culture, and literary talent. (3) The result is, Weston in many respects has a fine social set, within whose precincts the most fastidious could enjoy himself, and derive knowledge, as well as pleasure. Some of the older people of the State reside here, among whom many are descendants of Virginians. (4) Through their efforts, enterprise, and judicious management the town has grown until it occupies a place in history, and its epoch is necessarily drawn along the lines of future growth, and improvement.

(3) Probably some of the most cultured people in this section reside in Weston. Mr. Robert Bland, son of Dr. Bland, is a brilliant writer, and gentleman of marked genius. Mr. R. H. Harrison, editor of the "Democrat," Mr. Edwards, of the "State Times," are both broadly cultivated. Dr. A. H. Kunst, as shown by his treatise: "Freaks of the Brain," has exhibited no small talent for literary endeavor. Judge Henry Brannon, Judge John Brannon, Judge W. G. Bennett, Dr. G. B. Simpson, and M. W. Harrison, are gentlemen of unusual culture and education.

(4) Among the prominent people in Weston forming the set to which we have adverted may be named: the Bennetts, the Harrisons, the Blands, the Kunsts, the Livelys, the Simpsons, the Brannons, the Newlons, the Davissons, and others. These compose a fair social stratum that in many respects are distinct from the "vox populi" of Weston. This place was also the residence of the Camdens at one time.



Mountain Scenery.

CHAPTER XXIII.

Buckhannon.—Location, and Situation.—Growth of the Place. Present Mercantile, and Manufacturing Aspect of the Town. Scholastic Features.—Pickens.—Its Wonderful Growth.—Manufacturing Industries There.—G. M. Whitecarver.

Ascending the Alleghany spurs by a branch of the West Virginia and Pittsburg Railroad, in an easterly direction, we come to Buckhannon, a charming town, that is the county seat of Upshur. (1) This is one of the oldest places in the section, having been marked as a settlement when the Simpsons, David Files, and Tygart first wandered through this region. It is beautifully situated in a basin, composed of a lovely plateau, and presents one of the prettiest natural locations for a city that it has been our good fortune to see. It is surrounded by a fine agricultural region, and from the trade of the country around, grew to quite an important place, even before the advent of the West Virginia and Pittsburg Railroad. Since then, it has grown rapidly, and has a good reputation abroad as a place of business and residence.

It has quite a list of manufacturing plants, and is solid in a financial way. Here may be found flour mills, a furniture factory, marble and granite works, and one of the largest lumber plants in the State. (2) In addition to these, the town is the central position, and home office of several industries that extend their influence through the counties of Upshur, Randolph, Webster, and Nicholas. These latter industrial plants,

(1) Originally, when the early settlers came westward, this point was one of the first settlements made. While Files and Tygart were trodding along Tygart's Valley River, Simpson christened this place 'Buchanan,' after Colonel Buchanan, of Virginia fame, in Botetourt County. Subsequently, this town was changed in name from Buchanan to 'Buckhannon,' for some reason that has never been so truthfully given, as to justify the historian in relating it as a fact.

(2) The Buckhannon Lumber Plant has a manufacturing capacity of some 50,000 feet *per diem*. It employs a large number of operatives, and has been an important factor in the growth of the place.

(the Newlon coal works, and A. J. Giffen lumber plants,) have their central offices here, and work a large number of operatives through the various counties we have named. (3)

As a social place, and one for educational facilities, Buckhannon cannot be surpassed. The inhabitants comprise a fine grade of people, quiet, educated, hospitable, and refined. As may be imagined, particular attention is paid to the dissemination of knowledge, and the town possesses some fine schools. There is a college, a high school, and both graded and common schools, that draw many strangers within the precincts of their classic shade for an increase of knowledge. On the whole in this respect the town has no superiority any where.

The place has a fine commercial standing, and no little wholesale trade through the State. Its class of buildings are unusually good, and it possesses an electric plant. The name of the place is a synonym with the words, intelligence and refinement, to all acquainted with Buckhannon, and the very air surrounding the place gives a stranger the proper impression of the town. There is a staid population of some 2,700 people, with a strong tendency for an increase of inhabitants. A short time back, the County of Upshur voted quite a large subscription to a newly-projected railroad to run from Belington to Buckhannon. The construction, and completion of this would of course cause the place to grow more rapidly.

(3) The coal works to which we allude are run by Dr. Newlon, of Buckhannon. The mines are located a few miles east of the town, possessing a branch line from the West Virginia and Pittsburg Road. The output of these mines is large, and the seam of coal from which the product is mined, already alluded to in chapter on "Mineral Resources." A. J. Giffen deserves the gratitude of the people of this section. He has four or five saw mills located in the region we have named, and dispenses a large pay-roll, giving employment to the people. His sagacity, business qualities, and energy, have been used for the development of West Virginia's timber resources.



Mountain Scene.

PICKENS!

Where is Pickens, and what is Pickens?—is usually asked when the place is mentioned abroad! It is the youngest, and most advanced place for its age in West Virginia.

Less than three years ago, the traveller who ascended the Buckhannon River some twenty-five miles, traversed an unbroken forest where the variegated foliage shaded the violets, and the laurel and linden struggled for rays of sunlight, beneath the dense foliage of primeval poplars, hemlocks, and oaks. But amid these wilds, Senator Camden, Mr. C. K. Lord, and Mr. G. M. Whitescarver discovered the value of the lordly forests around. The result was, a large territory of valuable timber was purchased; the West Virginia and Pittsburg Railroad was extended southeast from Buckhannon, and the spot where Pickens now stands, chosen as the sight for a large lumber manufacturing plant, that has made the place since, quite a town. The town has become within the space of two years a place of some four hundred people, with one of the finest manufacturing plants for manipulating lumber in the State. In conjunction with this, is a manufactory of material for making cigar boxes, that is shipped both East and West. (1) These industries required a large number of operatives, and the logical result was a town within two years of more than three hundred people, engaged in profitable undertakings.

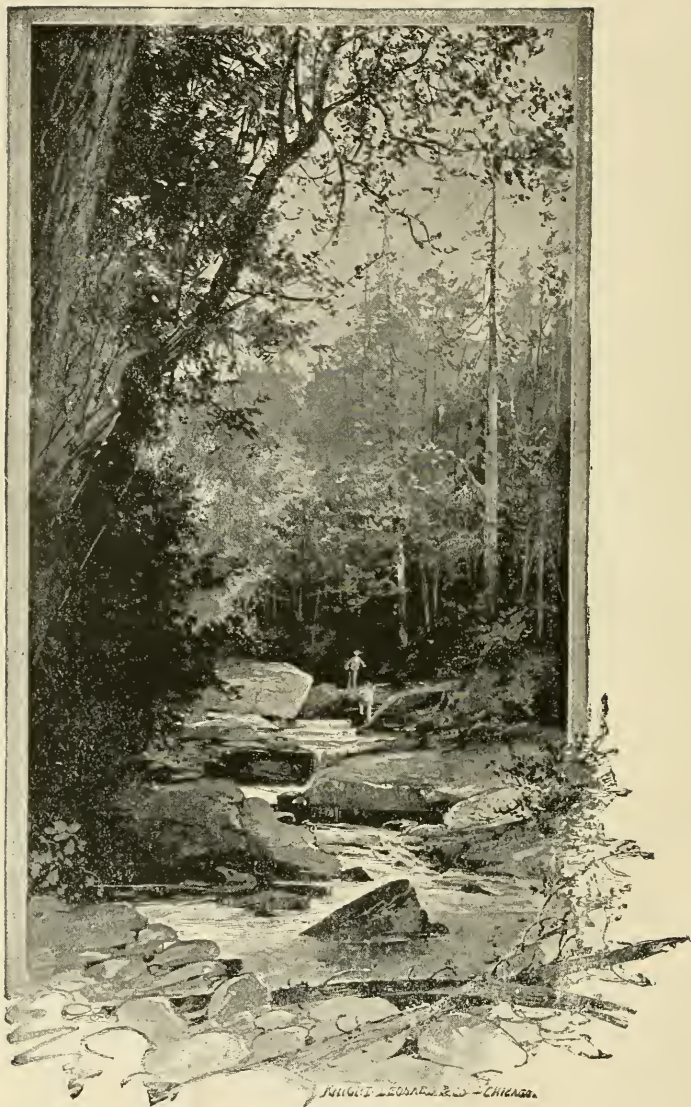
(1) The industries located here are of such a nature as to demand more than a mere passing notice. The lumber plant has a daily capacity of some 60,000 feet, and comprises the most modern equipments, appliances, and machinery. In connection with this lumber plant, to utilize what would be virtually cast-off material, is a factory making a stained material for the manufacture of cigar boxes, that is greatly in demand. Such industries are rare in this region, and on that account appeals strongly to us. This splendid plant, employing some two hundred operatives, is under Mr. G. M. Whitescarver's management, a gentleman largely identified with the development of the resources of Central West Virginia. He is a man of wide business experience, and most careful and conservative in his views,

But the timber interests are by no means the sole foundation for Pickens' future growth! As we have previously mentioned the town is situated in a region rich in the class of wealth known as earthly minerals. Some coal is around—a fine grade of building stone abounds, and the locality is rich in glass-sand, clays for pottery, and slates. These minerals have been practically tested, and are the future foundation of Pickens' growth. (2) There can be no doubt of the fact, that these minerals could be used to a most decided advantage by anyone locating a brick works, sand-crusher, and masher at Pickens. The slaty-clays, mingled with the ordinary clay turns out an admirable product for pressed brick. The glass-sand makes, under practical test, the best grade of flint glass, while fire-brick, paving-brick, as well as pottery ware could be profitably turned out. With this wealth at its doors, and the timber interests, named, it is not unsafe to predict that Pickens will grow. (3)

(2) It is due to a Mr. Roberts at this place, that the silica brick, and pressed brick, were tested from the material around. Both classes of brick were made from the material chosen by him, and took a high premium at the World's Fair last year. He sent the ingredients from which the product was manufactured.

(3) Pickens takes its name from the "Pickens family," of which Mr. James Pickens, owner of large interests there, is a member. Mr. Pickens' intimate knowledge of the country around, and his interest in its development, has given him the respect and gratitude of all thinking persons.





Mountain Scene.

CHAPTER XXIV.

Sutton.—Its Location on the Banks of Elk River.—County Seat of Braxton.—Population.—Manufacturing Industries.—Lumber Shipments.—Commercial Aspect.—Some General Remarks on the Place.—Camden-on-Gauley.—Southern Terminus of the the West Virginia and Pittsburg Railroad.—Manufacturing Interests There.—Advantages of Camden-on-Gauley as a Summer Resort.—Hotel Camden.—Col. J. A. Fickenger.—Capt. J. W. Mudd—Some Remarks as to Camden-on-Gauley's Future.

Leaving Weston, the West Virginia and Pittsburg Railroad runs southward, a distance of thirty-nine miles to Flatwoods, where it branches again, one extension going six miles southwest to Sutton, the county seat of Braxton; the other, southeast to Camden-on-Gauley.

Sutton, sometimes known as Braxton C. H., lies on the banks of Elk River, one of the loveliest rivers in West Virginia for the wildness, and native beauty of its scenery. Between two mountains, in a lovely valley, on the winding stream, nestles the town, which when regarded in its proper light, has necessarily a future before it. When Braxton County was cut off from its parent county, Sutton was then something of a village, and the advent of the extension of the West Virginia and Pittsburg Railroad gave a new impetus to things. The country surrounding the town is above the average of West Virginia's mountainous region in an agricultural manner, and gave the town quite a good support all the time. After the railroad reached the place, new blood arrived to be put in its material arteries, for Sutton grew rapidly. Manufacturing industries came in. First, the Pardee-Curtain Lumber Company erected its plant, on a gigantic scale, that gave employment to a number of people. (1) From the fact that Sutton was the terminus of the railroad in this region, it became a fine shipping point, gathering all the exporting material from the southern

(1) This plant having its works on the western edge of Sutton, is one of the largest, and most comprehensive of its kind in West Virginia. It has a daily output of some 75,000 feet, and its mills, yards, and appliances, are all of the most costly and perfect kind for the manufacture of lumber.

part of Braxton, and all of Clay. All the portable saw mills in the section sent their product here for shipment, so, it became one of the largest timber depots on the road. From this immense business, the place grew, until it is now a town of nearly 2,000 people, with a fair trade, pecuniary institutions, and several manufacturing plants. It is the commercial, and trading mart of this whole region which is without a railroad, and is daily increasing in size.

But there are certain points to be named in connection with Sutton that may eventually make it larger than it is. There is a railway line now in course of construction, called the Charleston, Clendinnen and Sutton Railroad. Already, the road runs from Charleston up Elk River some thirty miles, and arrangements are now afoot for raising the means of constructing it to Sutton, to connect with the West Virginia and Pittsburg Railroad. This line would follow Elk River all the way, penetrating the rich minerals of Clay County, and from a natural sequence of events would enhance Sutton's population, and improve its growth. Elk River is of wonderful service to the place in the way of water power, being the principal mode by which rough timber is floated down the river in the shape of logs for the saw mills, *et cetera*.

This town, from its natural situation, and water power, would be a fine location for wood-working plants, and other manufacturing industries. Especially, if Clay County was penetrated by the Charleston, Clendinnen, and Sutton Railroad would this be true. This would open up the vast timber, and mineral resources of Clay, that would be drawn to Sutton, as the shipping point for eastern, western, and northern trade.

As a general thing, the population of Sutton is composed of the descendants of the original pioneers of West Virginia. They are a good business people, and unusually kind and hospitable. (2) Many are in more than a comfortable state of life, while all are well to do, being engaged in the usual avocations of life that make, and build up a place. From a careful inspection, the financial, and mercantile bases of Sutton are unusually

(2) Some of the best people in West Virginia are residents in, and around Sutton, in Braxton County, among whom may be mentioned: the Camdens, Berrys, Hyers, Morrisons, Gross', Bynes, Blands, Newlons, Haymonds, Humphreys, Rollysons, Singletons, Squires, and others. Many members of these families have filled prominent positions in public life, political and otherwise.

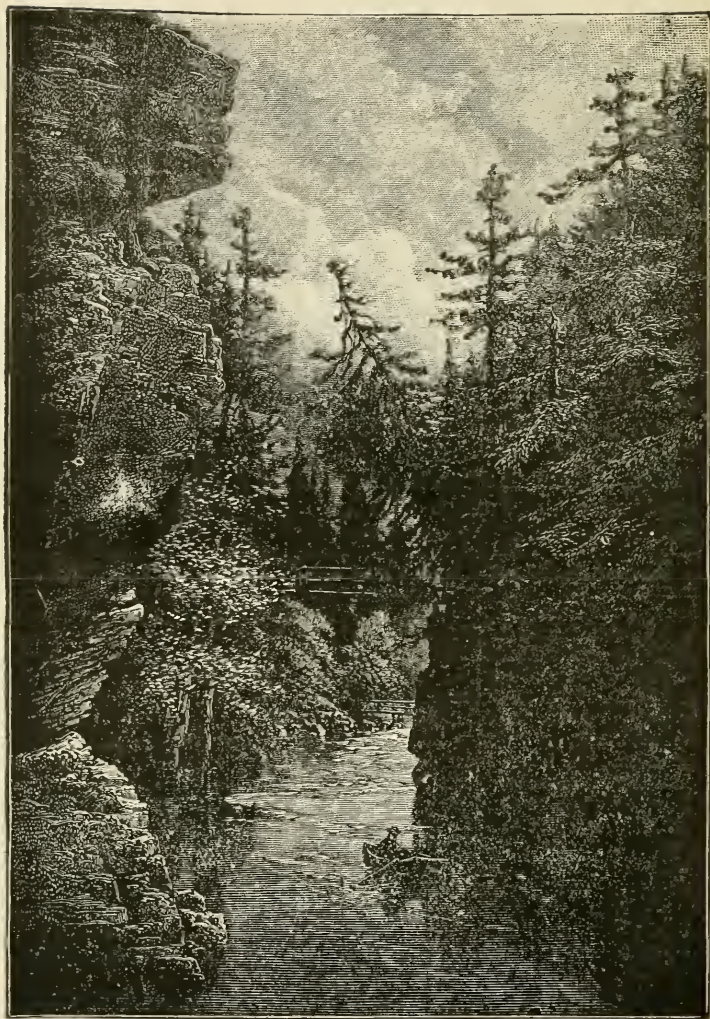
good and sound, resulting from the people being principally engaged in paying pursuits.

The scholastic advantages of the town are amply sufficient for the needs of the place. Both high and graded schools are here, and it is one of the places in the section where the summer institutes are held. Some fine talent in a cultured way has come from Sutton, and the neighborhood, that speaks well for the early education of persons in this region. (3) Nor is this acquisition of knowledge confined alone to the male sex. Some of the softer ones possess literary talent as well. (4)

The moral tone of Sutton in many respects is unusually good. It has been by some criticised, but justice demands that this criticism be laid aside as untrue, malicious, and unjust. The people are peculiarly free from intoxication and its attendant evils, and taken as a whole, are very good, kind, and pleasant—more so, than in other places we might name if we were desirous of so doing. For many purposes, and reasons, Sutton commends itself to the public as a point for manufacturing interests, and those who have engaged in mercantile and financial pursuits have done well.

(3) One of the most talented, and learned men now in the South, comes from one of the prominent families of Sutton. We allude to Prof. Humphreys, Professor of Greek in the University of Virginia at the present time. Educated in the classic shades of Washington and Lee University, in Lexington, Va., he exhibited early a decided talent for mathematics, and the languages. He filled a chair there as Professor of Mathematics, and was afterwards called to the University of Texas, where he made a mark of decided distinction. Subsequently, upon the resignation of Prof. Gildersleeve from the chair of Greek at the University of Virginia, he was called to fill that, and now resides at Charlottesville, Va. He is one of the most learned men in the South, possessing a broad culture on all subjects rarely attained by any man—scarcely ever, by one so young as he is at the present time. On mathematics, astronomy, or Greek, we doubt if he has a superior anywhere, and he is in addition to all, a good writer. He mastered all this knowledge by his unaided efforts, and now sheds a bright lustre over the name of his family, and native State, both of which are equally proud of him.

(4) Miss Annie L. Berry, whose pen has attracted attention by her descriptive writing, and the author of the article on public schools given in a former chapter of this work, is a native of Braxton County, living near Sutton. She is the daughter of Mr. E. A. Berry, Sheriff of Braxton County, and a descendant of one of the oldest families in this section. Miss Berry's composition and powers of diction are extremely pure, and beautiful. Around the whole is thrown the charm of unconscious simplicity, that appeals so strongly to every intelligent reader. Considering her talents, and the fact she is but nineteen years of age, it is not unsafe to predict a bright literary career, for her, if her versatile powers are properly trained and utilized.



Mountain Scene.

CAMDEN-ON-GAULEY.

Moving up Elk River from Flatwoods, by the West Virginia and Pittsburg Railroad to Camden-on-Gauley, a distance of some forty-three miles, we have a vista of scenery that pen-pictures fail to describe. The stream winds about in its tortuous course, leaping over boulders of rock here, and rushing down over a ledge of rocks there, forming falls and pools in rotation. The gigantic forest trees, shade the crimson of the sumac, and glistening green of the laurel; while the honeysuckle, and violet, peep from under the white blooms of the dogwood. When nature smiled upon the country around Camden-on-Gauley, she imprinted her loveliest salute upon it, and left us nothing to desire in the way of beautiful scenery.

The original cause of Camden-on-Gauley's becoming a town, resulted from the purchase of an immense body of timber-lands consisting of 140,000 acres in Webster, Pocahontas and Nicholas Counties, by Senator Camden; who connected it with the West Virginia and Pittsburg Railroad. When the Gauley Lumber Company was formed, Mr. C. K. Lord, Third Vice-President of the Baltimore and Ohio Railroad Company, became interested in the plant, and he, and Mr. Camden determined to develop it. A railroad was projected from Flatwoods to Camden-on-Gauley, (then Lane's Bottom,) and arrangements were made for placing down what has since proven the most immense, and gigantic lumber plant in West Virginia. Only a few years ago this work was begun, and at the time, the country was a wild; unkempt, without any material industry whatever. The machinery for this large plant, that cost over \$140,000, was first hauled from the Chesapeake and Ohio Railway, a distance of fifty miles. By the time the West Virginia and Pittsburg Railroad reached Camden-on-Gauley, the lumber plant was completed, and ready for work. (1) It is acknowledged to be the best of its kind in the State, and connected with it, is a planing mill, and dry kiln of

(1) This plant is the most expensive, and complete of its kind in West Virginia. It has a daily capacity of 100,000 feet, and when both band saws are running can produce a great deal more than that. From the steam engine, driving the large carriers, and saws, to the overhead tracks for conveying off and loading lumber, the whole equipment is nearly perfect, and one can imagine the value of such a plant in an industrial way.

large dimensions. A portable saw mill is used also, and the shipment of ties and logs, another branch of this lumber plant. Some three hundred operatives are employed in all the various departments at times, so we need not feel surprised that within the period of eighteen months Camden-on-Gauley grew from nothing, to a thriving, business place of more than four hundred people.

In addition to the industries already alluded to, others exist here, that give the place a good support as well. This place being the terminus at this end, of the West Virginia and Pittsburg Railroad, is a good shipping point. Especially is this true with reference to lumber, large quantities of which are hauled to Camden-on-Gauley in its manufactured state. This business increases the mercantile trade of the town, and gives employment to a large number of people. Merchants, mechanics, and professional men have followed in the train of these various undertakings, to fill the usual wants and requirements of humanity. The large lumber plant here is supplied with logs by means of dams, and a boom in Gauley River, all of which were constructed under many difficulties, and amid a great many hardships. (2)

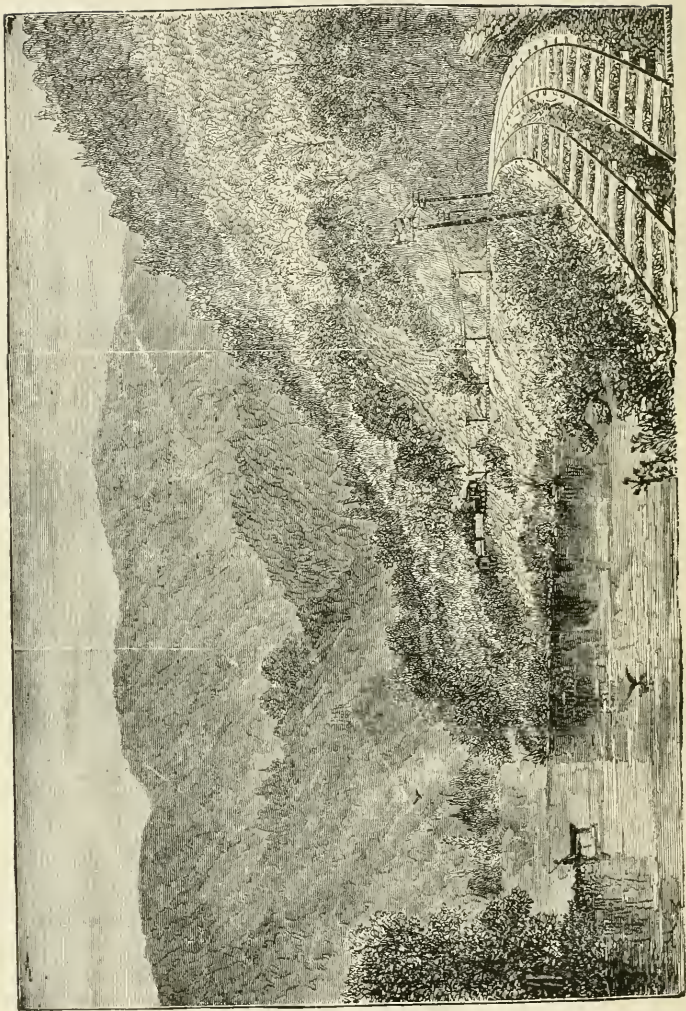
But Camden-on-Gauley is not only a place of manufacturing power, but a pleasant summer resort as well. Turn where we may; look as we choose; and, we can find no place in West Virginia (the springs region not excepted), that affords more desirable advantages as a summer resort. The topography of the country is varied; the scenery exquisite, while the summer climate is superior to that of any other point in West Virginia. The hottest days of July and August pass unheeded here, because a fan is unnecessary in the shade. The nights are delightfully cool, covering being comfortable. Mosquitoes, agues,

(2) The completion of this immense plant was effected by Colonel J. A. Fickenger, who has since had charge of the works as General Manager. He has been connected in many ways with the development of the resources of this section, and has considerable executive, as well as administrative talent. Originally from Ohio, he is a civil engineer, having held the position of Assistant Engineer on the Ohio River Railroad. Subsequently, he was made Chief Engineer of the West Virginia and Pittsburg Railroad, which position he now occupies. He engineered, and constructed the branch from Flatwoods to Camden-on-Gauley, by far the best piece of road possessed by the system. Since then, he has devoted himself to the interests of Camden-on-Gauley as General Manager of the Gauley Lumber Company.

or chills, are unknown, while Hotel Camden furnishes the most charming and delightful quarters. (3) Those who have been so fortunate as to have visited Camden-on-Gauley in the summer, speak loudly in its praise. To all seeking pleasure, comfort, and rest, it can be warmly commended in every sense of the word.

(3) This hostlery, by its well-appointed furnishings, and carefully prepared *cuisine*, has established an enviable reputation throughout this State. It is situated on an eminence facing the Gauley River, with a spur of the Alleghany on the opposite side of the river, giving the beholder a weird vista of mountain, stream, and scenery. The hotel is in charge of Captain J. W. Mudd, who has been at Camden-on Gauley since its incipiency. He is a gentleman who has watched and assisted in the development of the two Virginias for a number of years. He is a brother of Dr. Mudd, who wrote the well-known letter identifying Wilkes Booth's demise. The Captain was purchasing Quartermaster for the Army of Northern Virginia in the late Civil War, and has had ample opportunities to watch passing events, as well as those acting a part in them.





Scene along the Potomac River.

CHAPTER XXV.

Grafton.—Cause of its Growth.—Situation and Location of the Town.—Manufacturing Industries.—Divisional Termination, Baltimore and Ohio Railroad.—Population of the Place.

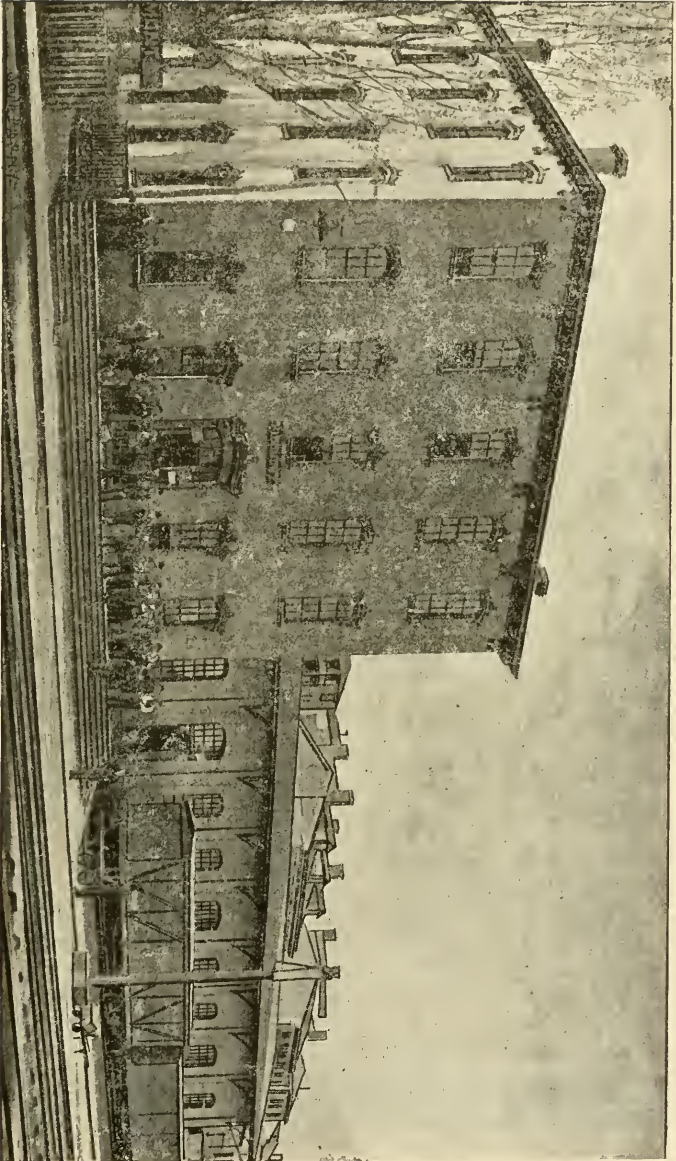
Grafton, the county seat of Taylor, lies directly upon the line of the Baltimore and Ohio Railroad Company, being a large divisional termination for both the Cincinnati, and Chicago Branches of the Baltimore and Ohio System. This town may be said to be purely a creation of the great system running through it, although there are other manufacturing industries within its limits now. Early in the year 1853, when the Baltimore and Ohio was being constructed westward, the place was a mere hamlet, but as the line made it an important terminal point, it grew rapidly. At last, the Court House was moved from Pruntytown, some miles west, and placed at Grafton, a move that redounded greatly to the benefit of the latter place. As time passed on, the business of the railroad increased, and consequently, the town grew from the enlargement of shops, round houses, and the crews. People at last began turning their attention towards Grafton as a place of investment, until the town has some 3,500 people or more.

Grafton is somewhat of a manufacturing place, having the following plants within its limits: two flouring mills, two planing mills, a foundry, and saw mill plant. These do a fairly nice business, and thrive as well as other industries of a like nature elsewhere. And there can be no doubt that other manufacturing industries, either in the manufacture of iron, or the products from fire clays, would do very well at Grafton. Both materials are found in Taylor County in large quantities. (1) The place has wonderful railway facilities. Here, Cincinnati, Chicago, and St. Louis in the West, are in daily and direct communication with the place, while New York, Philadelphia, and Baltimore are close at hand. We can scarcely name any place blessed with better railway facilities.

(1) At Cove Run, nine miles south of Grafton, on the line of the Greenbrier and Grafton Division of the Baltimore and Ohio, is found large quantities of iron ore, coal and fire clays. Limestone abounds at this point as well, all of which would bear transportation to Grafton.

But Grafton, like most divisional points on large railway systems, derives its chief supports from the railroad company itself. Without careful examination it is impossible to understand, and appreciate the effect of the bearing upon a town by a line that has its end of a division there. In the first place, the construction of the repair shops, car sheds, round houses, and yards, mean a large expenditure of money and capital. The change of crews necessitates residences, homes, and boarding places, for the employees, which means an additional expenditure of money. Then the train of merchants, mechanics and money institutions follow to supply the wants of the people. So, with all the ramifications in a matter of this nature, it will be readily seen that such divisional terminations mean a great deal for a place. And in this respect Grafton has been particularly fortunate. The Baltimore and Ohio is double-tracked as far as Grafton. Then, one line goes to Cincinnati; thence to St. Louis; while another goes to Chicago, *via* Wheeling, and Bellaire. Two divisional stops really centre at this place, and as long as the Baltimore and Ohio System increases, Grafton must increase also. The result of this activity in railway circles causes the place to be quite a mercantile centre, and Grafton, in addition, has become a trading mart for the surrounding country.

The population of Grafton, numbering some 3,500 souls, is largely composed of the class of people known as: "railroad men!" Many of these are industrious, sober, and good citizens, owning their homes, and investing their surplus money. The place has good schools, and fine privileges in many respects. On the whole, it is a substantial town, and one among many that owes its existence and support to the Baltimore and Ohio Railroad Company. This system has its divisional offices here, as well as a fine hotel, that is a great advantage to the town. We feel sure that the place has a stable foundation on which to rest, from the fact the shops, yards, and so forth, erected by the Baltimore and Ohio are of such a magnitude that they can scarcely be moved consistent with true economy. And as that is a virtue of most systems now-a-days, we have very good assurance that Grafton must continue to increase.



Baltimore and Ohio Railroad Station, Piedmont.

CHAPTER XXVI.

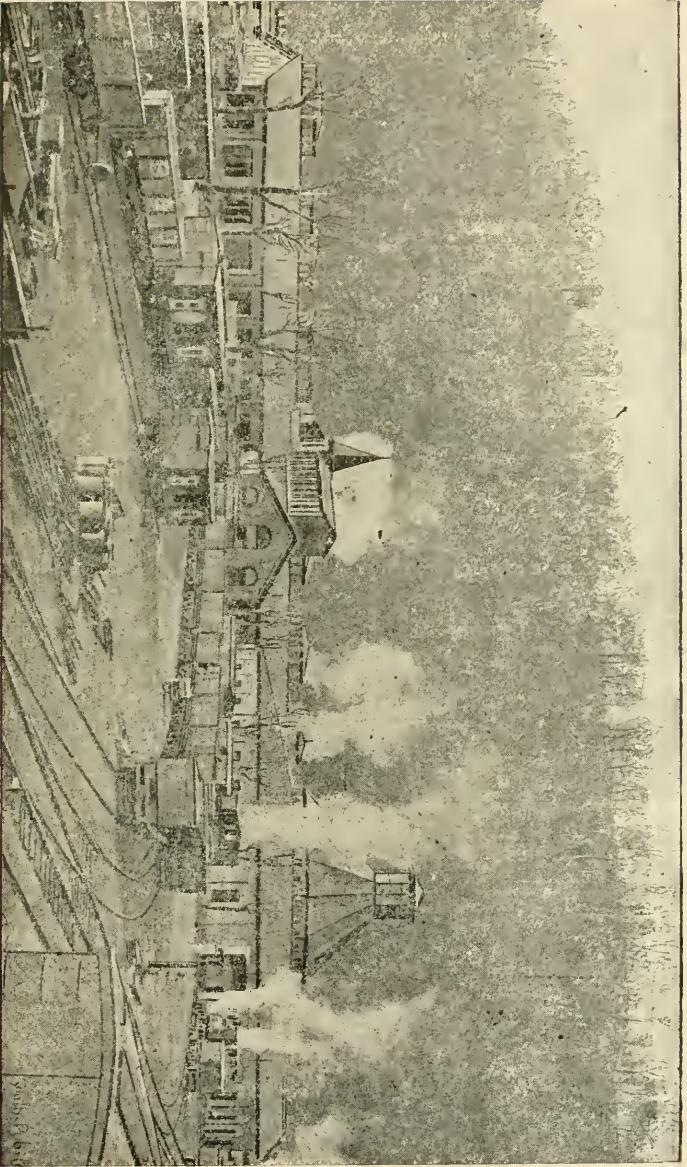
Location of Piedmont.—A Divisional Point on the Baltimore and Ohio.—Westernport.—Manufacturing Industries Located There.—Formerly, Terminus of West Virginia Central and Pittsburg Railroad. — Population. — Educational Facilities. General Remarks.

There is a great deal in connection with Piedmont, that renders it superior to the average town in a great many respects. Located on the upper part of the Potomac River, in Mineral County, it has the advantage of competitive railway systems, that is not accorded larger places in many instances. The Baltimore and Ohio Railroad runs through the town, while the West Virginia Central and Pittsburg Railroad goes through Westernport on the other side of the river. This latter line connects at Cumberland, Maryland, with the Cumberland Valley Division of the Pennsylvania System. The Cumberland and Pennsylvania Railroad running by Mt. Savage and other important places has its termination at this point also.

The beginning of the growth of Piedmont may be attributed to the construction of repair shops, and round houses, by the Baltimore and Ohio, and making the town another one of its divisional stops. This gave the place an impetus towards improvement, that was greatly accelerated by the fact that Westernport (a town across the river from Piedmont), was for quite a while the terminus of the West Virginia Central Railroad. This place may be said to be a part of Piedmont now, as both towns have a complete unity of interest.

Piedmont has become quite a manufacturing centre of late years. The large paper and pulp mills of Luke Bros. are located here, that are sufficient within themselves to create a town, (1) and get nearly all their raw material from the neighboring

(1) These paper mills employ some two hundred operatives, and have an unusually good plant and equipment. The houses for the employees, with the buildings of the works constitute a small town within themselves, that attract the attention of every one. Just such industries as this one, is what West Virginia needs to develop its resources.



Baltimore and Ohio Freight Yards, Piedmont.

counties. They manufacture large quantities of every variety of paper, that is sold to the wholesale dealers in all parts of the North and East. Another very pretty industry here is the Piedmont Machine Works, that is a part and parcel of the Twin Towns Manufacturing Company, an organization formed to locate industries here. (2) Piedmont is undoubtedly a good point for the location of manufacturing industries.

As before mentioned, this point was at one time the terminus of the West Virginia Central and Pittsburg Railroad, which now runs to Cumberland, Maryland, instead. Being on that account the shipping terminus of this system for quite a while, it derived considerable benefit from that position.

The repair shops of the Baltimore and Ohio as a divisional terminal are located here, and have been the bone and sinew of the town. Many employees reside here, and the shops and yards are quite imposing, while the money expended in Piedmont from this source is quite an item to the place. It not only increases the mercantile stability of the place, but makes the town a trading centre for the surrounding country on that account. The Railroad Company has a splendid depot constructed here, which adds greatly to the appearance of things, as well as comfort of the passengers.

The population of Piedmont, together with Westernport, numbers some 3,500 people. They are energetic, reliable, and good business people in every way. The manufacturing interests here are due more or less to the energy and patriotism of the people with reference to Piedmont.

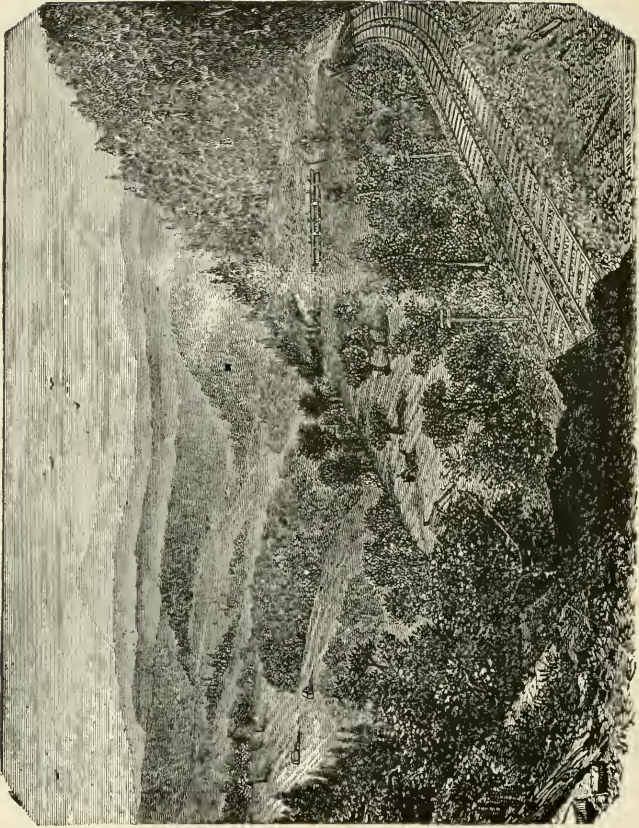
(2) This incorporation, known as the "Twin Towns Manufacturing Company," has for its object the development of the resources of West Virginia, and on that account is entitled to more than a mere notice. The object of the organization was to induce capital to locate at Piedmont for the purpose of using the raw material in the section. They purchased a large boundary of land west of Westernport, that is admirably located for manufacturing sites. Already they have located a nice plant, known as the Piedmont Machine Works. This industry is for the manufacture of all kinds of machinery, turned out in an ordinary plant that is composed of, foundry casting shop, pattern, and machine shops. In particular, do they adhere to the construction, and repairing of all kinds of mining cars, and mine materials. The works employ quite a number of operatives, who live in Piedmont, and Westernport. Owing to profusion of the raw material, there can be no doubt that the Twin Towns Manufacturing Company can offer rare inducements to any one wishing to establish a fire-brick works or pottery establishment. The clays are prolific near this point.

Educational facilities in Piedmont are unusually good. In addition to the usual grade of common schools, and graded ones, the place has a fine high school under charge of a most competent, and efficient gentleman. (3) The facilities here strike us as remarkably good for obtaining all the rudiments of learning necessary to equip us for the battle of existence, that most of us have to engage in, while sojourning in this life,

Taking all things into consideration, this place impressed us with unusual force, owing to its railway facilities, and character of industries located here. That it is a point where other manufacturing plants could be located with success is true, and we feel safe in predicting that Piedmont, sooner or later, will be the chosen spot for many undertakings in an industrial, and commercial way, that are not located there at present.

(3) Prof. O. H. Bruce, is the Principal of the school in this place. He is also editor of the "Daily Herald," and Secretary of the Twin Towns Manufacturing Company. He possesses a fine sense of intellectual development, and is an enterprising business man. He is largely interested in the development of Piedmont.





Mountain Scene.

CHAPTER XXVII.

*Towns Along the West Virginia Central and Pittsburg Railroad.
Bayard.—Davis.—Elkins.—Conclusion.*

In a former chapter on the West Virginia Central and Pittsburg Railroad, we have already alluded to the development inaugurated by this line, not least among which is the growth of several good towns along the line of that system. The first we reach after leaving Piedmont on the main line is:

BAYARD. (1)

Bayard lies in Grant Country, directly upon the line of the West Virginia Central and Pittsburg Railroad. It has grown quite rapidly since its commencement a few years ago, until it has become one of the largest and most prosperous places on the line. The cause of its growth may be attributed to two large industries that could not fail to attract attention. One is the Buffalo Lumber Company, that was located there, and which is one of the most successful of its kind in this section of country. The plant works some seventy-five or eighty operatives, and has a daily capacity of over 40,000 feet per diem. It has been very successfully managed, that accounts in a measure for the growth of the town. (1) Another very large industry located here is the Middlesex Leather Company. This plant employing a large number of operatives, manufactures leather

(1) This town takes its name after Senator Bayard, from Wilmington, Del., who is now Minister Plenipotentiary at the English Court.

(1) Mr. C. B. Rees, from Keyser, West Virginia, has been so closely identified with the interests and growth of Bayard, that he is virtually a part of it: having faith in the town, he gained large interests there, and was made President of the Buffalo Lumber Company, which owes much of its success to his ripened business knowledge. He is greatly interested in the development of the resources of this section, and is a firm believer in the bright future of West Virginia's material wealth. He has fostered, and encouraged, the growth of this place in every way possible, and given both his time and attention to that object. His efforts so far have met with success, and the future in this respect is a bright one for him.

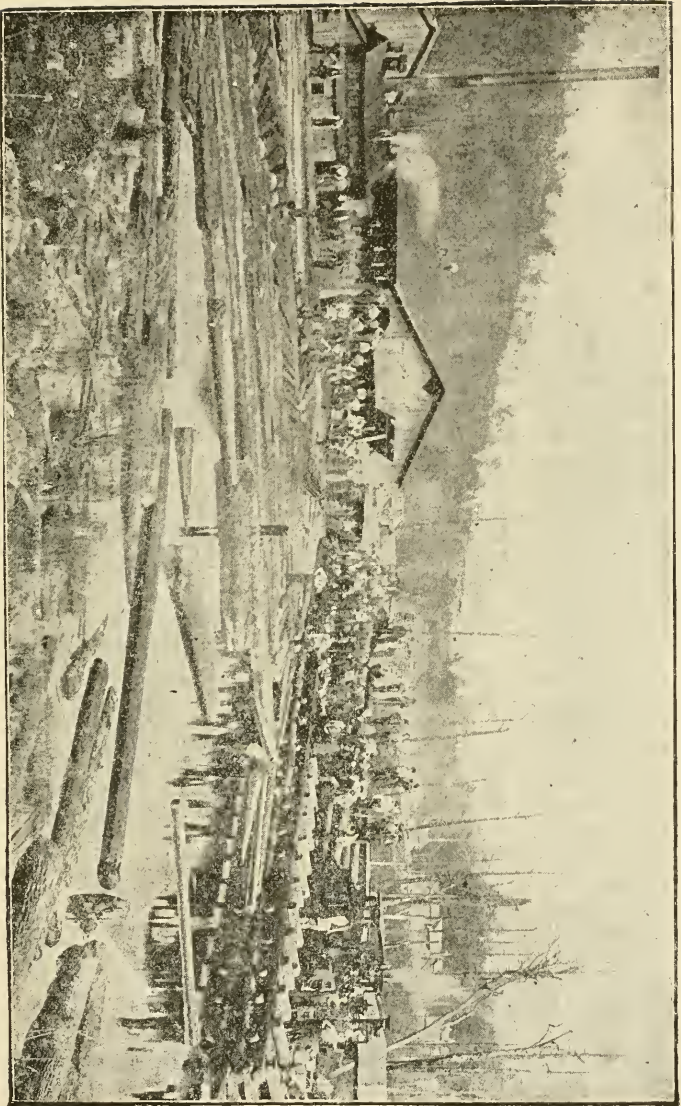
from the raw hides which finds a ready market in Boston, and other eastern marts. The accessibility of tanning bark at this point, is doubtless the cause of the industry being located here. Large quantities of hemlock timber are found not far from the town. The North Branch Coal and Coke Company has its principal office here, and is a thriving industry in every way. (2)

These large plants caused Bayard to grow considerably. But the place has other resources that will be most material in assisting in its future growth. Around the town, large deposits of coal, clays, and glass sand exist. (3) Bayard, on account of the timber resources, would be an admirable place for the manufacture of wood-working material. A bric-a-brac factory, a chair factory, or a blind, door and sash factory, could reap a profit on an investment here. Owing to the propinquity of coal, glass sand, and fire clays, both a glass factory, and fire brick works could be successfully located at this point. Especially is this true, because it is the policy of the West Virginia Central and Pittsburg Railroad to foster such enterprises,

The population of this town has grown to number almost a thousand people. They are an intelligent, quiet, business people, who are interested in the growth of the place. Both churches and schools are here, so that the better plane of human nature may be cultivated. The scenery around Bayard is peculiarly attractive, and it is the concensus of opinion of those in a position to know, that the place will grow in the future.

(2) Mr. George Rees, a son of Mr. C. B. Rees, has the management of this plant, and, although a young man, is not only deeply interested in West Virginia's development, but possesses more than ordinary knowledge on the subject of its resources.

(3) Bayard lies in a region that is quite prolific in minerals. Some ten thousand acres of coal land, owned by The Bayard Coal and Coke Company, and Senator Davis, show a fine deposit of coal, fire, and pottery clays, and glass sand. The property of The Bayard Coal and Coke Company is well developed with respect to these minerals. The coal seams show a thickness of some five feet of bituminous coal, while the fire clays average two to three feet. The glass sand is the refractory, granular quartz that is such admirable material for the manufacture of flint glass. This grade of sand has been pronounced superior by the glass works at Fairmont.



The Buffalo Lumber Company.

DAVIS.

Davis is probably the largest town on the line of the West Virginia Central and Pittsburg Railroad. (1) On reaching what may be termed the top of the Alleghany Mountains, we come to Thomas, where the large coal and coke works of the "Davis and Elkins" plant is located. A branch road running eastward for six miles, conveys us to Davis, a thriving town of some fifteen hundred people, who derive their support from the coal works, and manufacturing industries at the place. The town is located in Tucker County, and may be considered a growing place. The following manufacturing industries are there: two large lumber plants, a tannery, and some minor ones. Davis would be another point which would be fine for the location of wood-working plants, since the place has proven a good point for the industries already established there. It possesses the raw material, which could be successfully operated. Fire-clays, and some iron ore, exist in the section, that could be profitably utilized. Davis is a very progressive place in a mercantile and financial sense. The large coal and coke works nearby, as well as manufacturing industries, in the town, has established a basis for mercantile trade. This is increased by that of the surrounding country, which does much of its trading there. The result is, both commercial and monied institutions are here, and on a firm basis.

Scholastic facilities are good, and the people intelligent, industrious, and business-like. Owing to its fine climate, and high elevation, Davis should be a fine summer resort.

(1) This place is named after Senator Davis. If the town imitates his spirit of development, and exercises the judgment, prudence, and foresight evinced by him, it will soon be a large city.

ELKINS.

Elkins, situated in Randolph County, on the line of the West Virginia Central Railroad, is at present the virtual terminus of the line, although two branches run from this point: one to Beverly, the county seat of Randolph, and the other to Belington. In many respects, the town is the most prosperous, owing to its favored location, and the patronage extended to it by the railway company. (1) The place is located in a lovely valley, bordering the northeastern banks of Tygart's Valley River, and a more admirable sight for a future city could not have been chosen. The West Virginia Central and Pittsburg Railroad Company has chosen this point for the location of their engine and car shops, both in the constructing and repair line. The buildings erected are of the handsomest, and most substantial kind in their way, and employ a large force to turn out the work of construction and repair. The advantage of such a plant may be well imagined, since the majority of the operatives live here. The town has at present some 800 people, and may be said to be increasing.

The place is unusually well based in a material, mercantile, and financial way. The necessity of supplying the large number of employees with the necessaries, and commodities of life, has drawn an unusually good class of merchants here. The superiority of these, over those of the surrounding country, draws a great deal of the trade of the latter to this point. The town possesses in addition to the handsome plants we have named, several industries in lumber, which add to its material prosperity. It has also an electric light plant, and is on the road to material growth.

The class of architecture in Elkins is of a very superior class. The shops alluded to, are models of architectural work. Hotel Randolph, the residences of Hon. S. B. Elkins, and ex-Senator H. G. Davis, are all beautiful, and add materially to the general make-up of the place.

The town has good schools, churches, and is settled by an industrious, intelligent set of people.

(1) This town is named after Hon. S. B. Elkins, late Secretary of War under President Harrison's administration.

CONCLUSION.

From the foregoing short and imperfect sketches of the towns we have named, the reader will see that much has been omitted that could have been truthfully and advantageously said. But the treatment in the main body of the work, of the resources of Central West Virginia, required so much time, and space, that the latter subject was necessarily treated in a limited manner. Still, enough has been written to give the reader an idea of the places, and to show that with the resources, and transportation facilities surrounding, they are necessarily obliged to become important factors in the future make-up of Central West Virginia.

THE END.



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ERRATA.—Chapter XVIII, Note 1, page 166, "over two years of age," should read, "over twenty-one years of age."



